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*Indicates Clinicopathologic Conference Case Report.

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J. J. Moore, Dept. Editor

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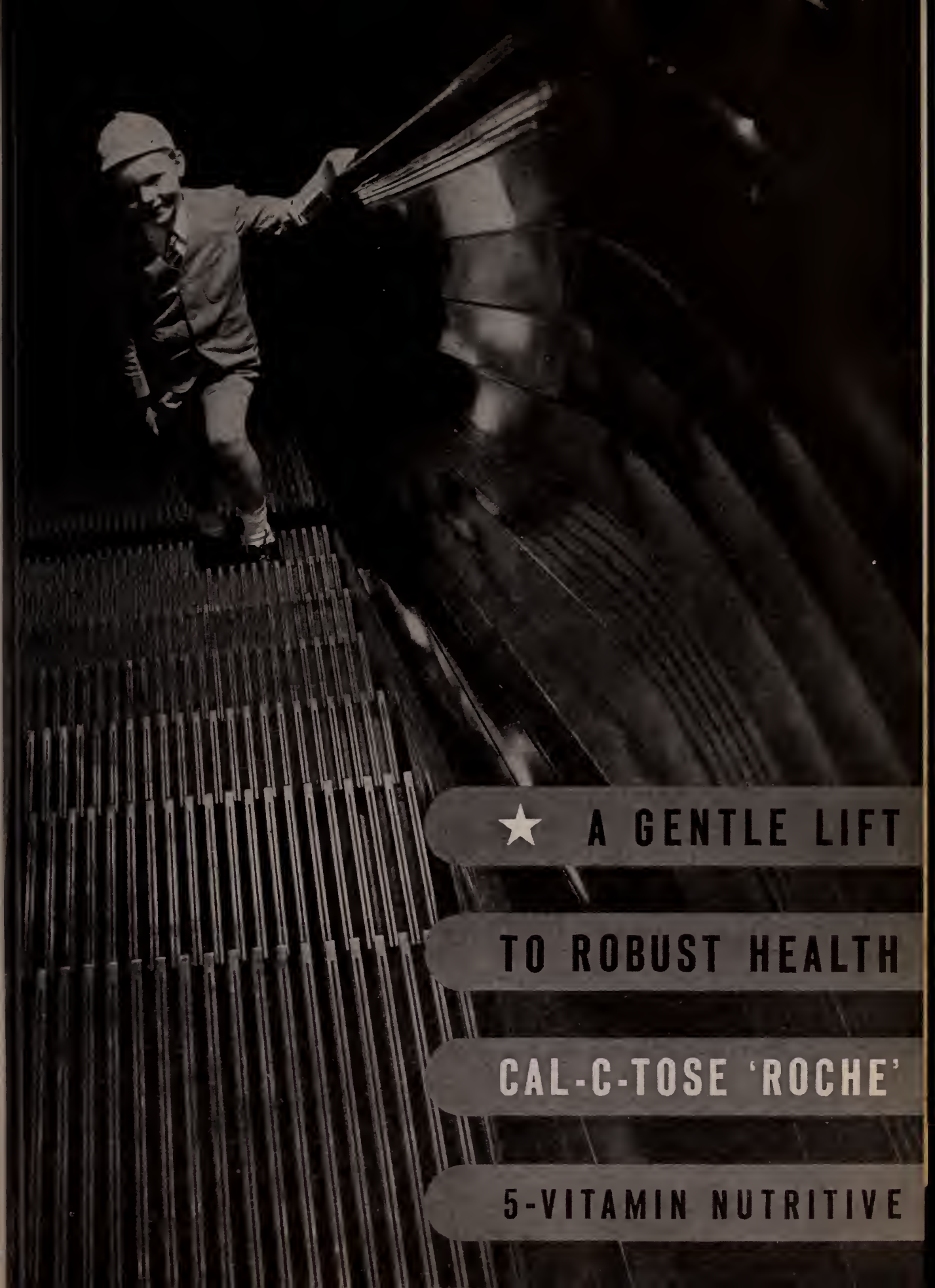
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Steck, I. E.:
Ohio St. Med. Jl., May, 1942.

improvement especially was marked and sustained, and **no serious toxic manifestations were encountered.**

Snyder, R. G. and Squires, W. H.:
Mod. Med., p. 40, June, 1940.

6. No untoward symptoms appeared throughout these tests, and no patient complained of any discomfort except a "slight

Krafka, J.:
Jl. Med. Ass'n, Ga., 30:398-400, September, 1941.

apparently less toxic than other forms used. T the problem would require considerable more

Reed, C. I., Struck, H. C. and Steck, I. E.:
University of Chicago Press, 1939.

countered by other investigators when these other forms of vitamin D were used. **These symptoms of toxicity have never occurred in any of our patients who received Ertron.**

Forley, R. T., Spierling, H. F. and Kraines, S. H.:
Indus. Med., August, 1941.

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Livingston, S. K.:
Arch. Phys. Therapy, 17:704-706, November, 1936.

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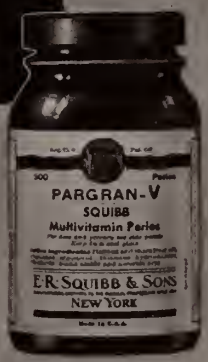
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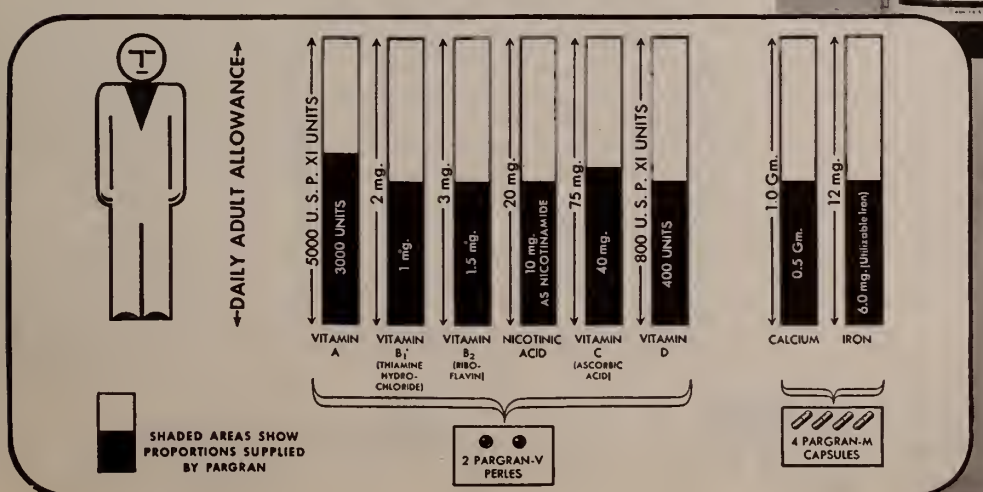


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*J. M. Soc. New Jersey, 36, 442 (July) 1939.

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[1]PARKER, R. R.: J.A.M.A. 110:1184,1273 (1938).
[2]COX, H. R.: Pub. Health Rep. 54:1070 (June 16) 1939.

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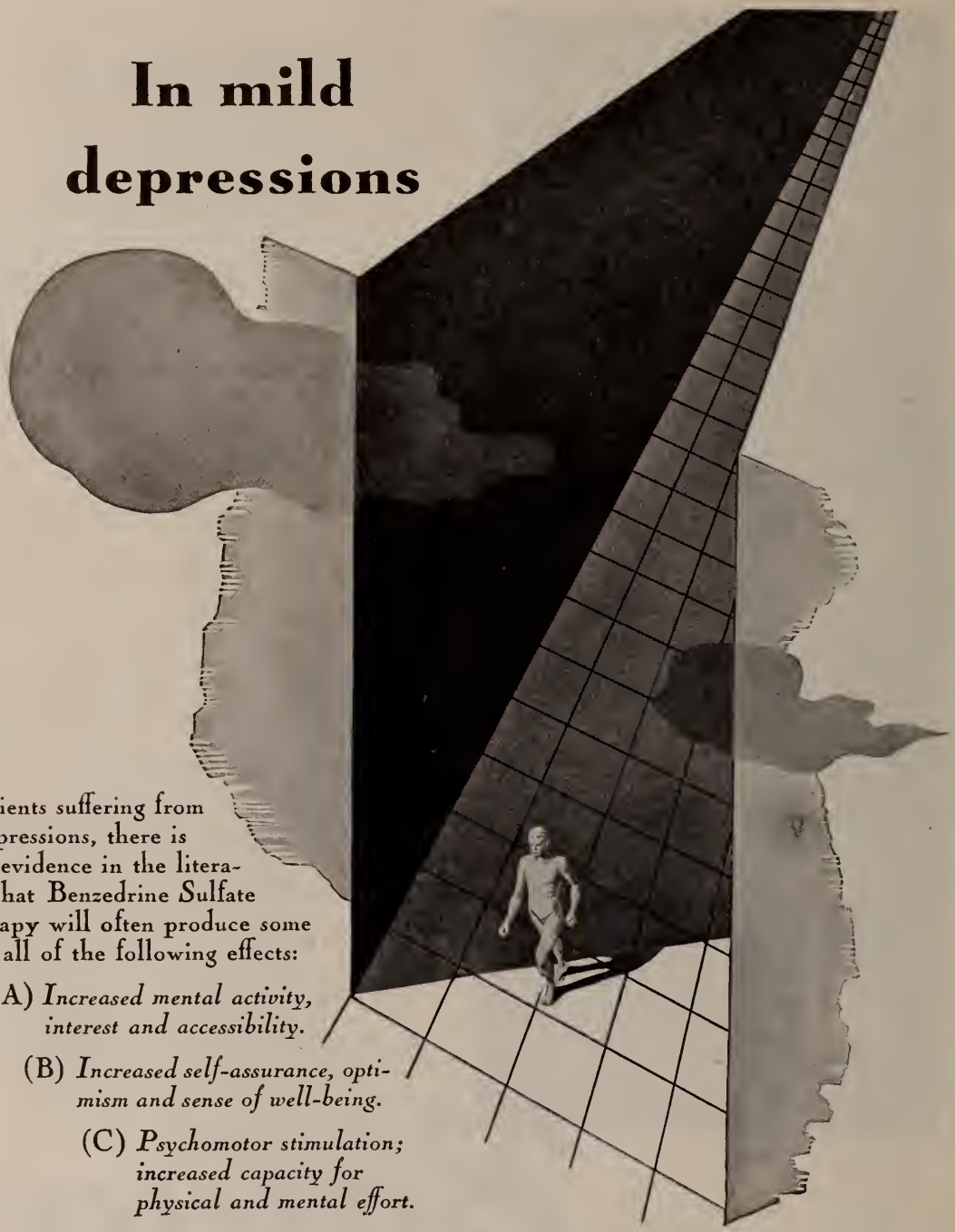
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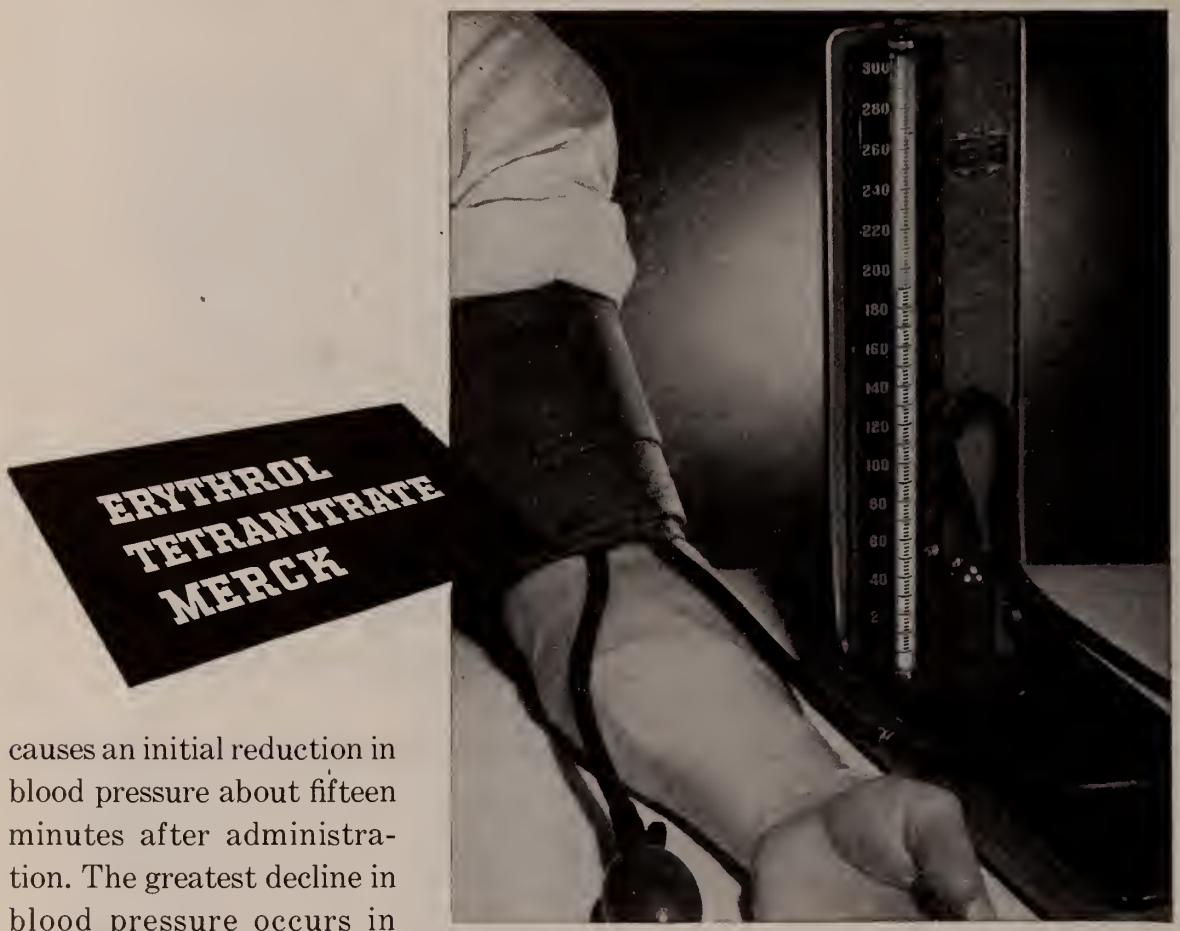
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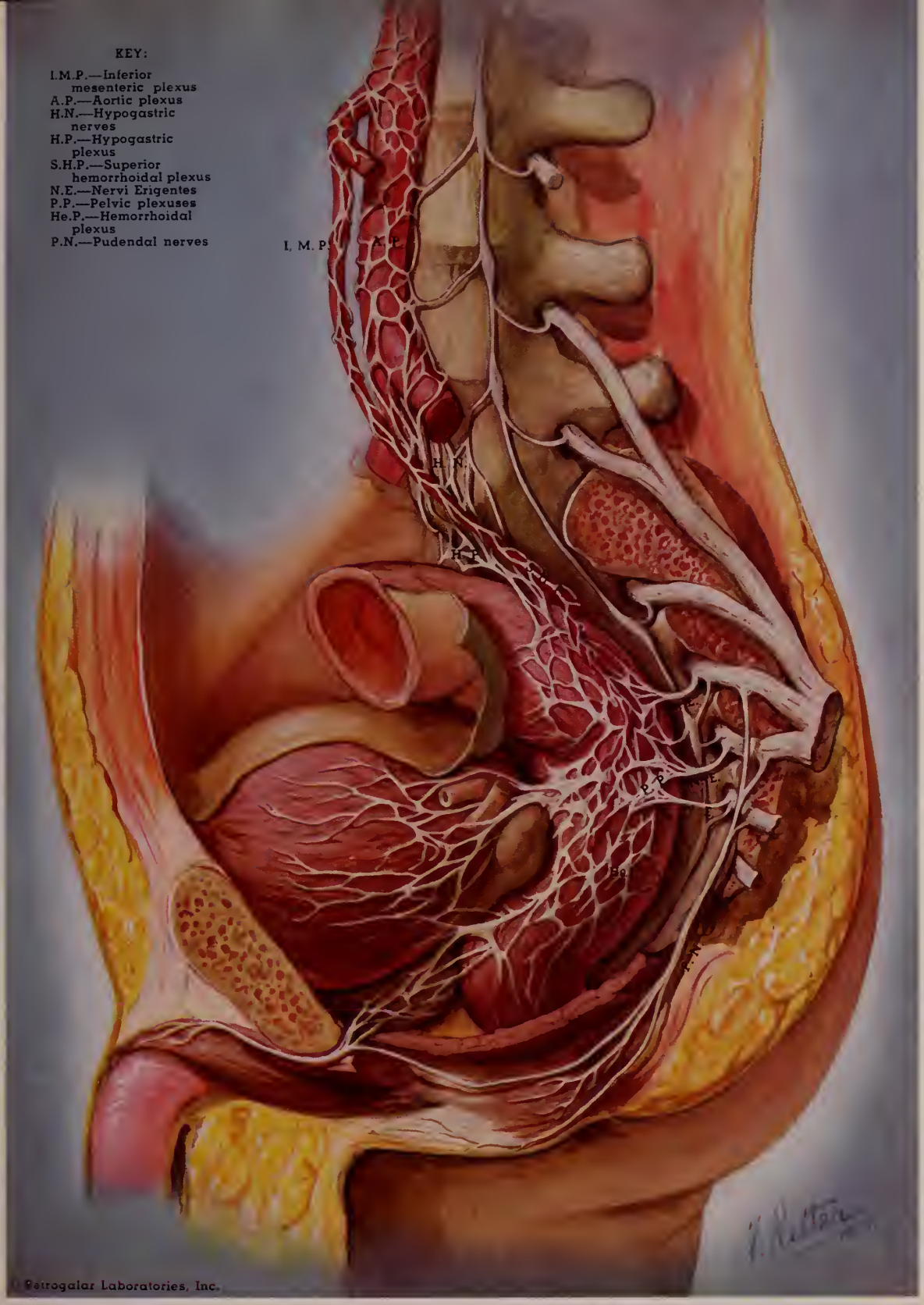
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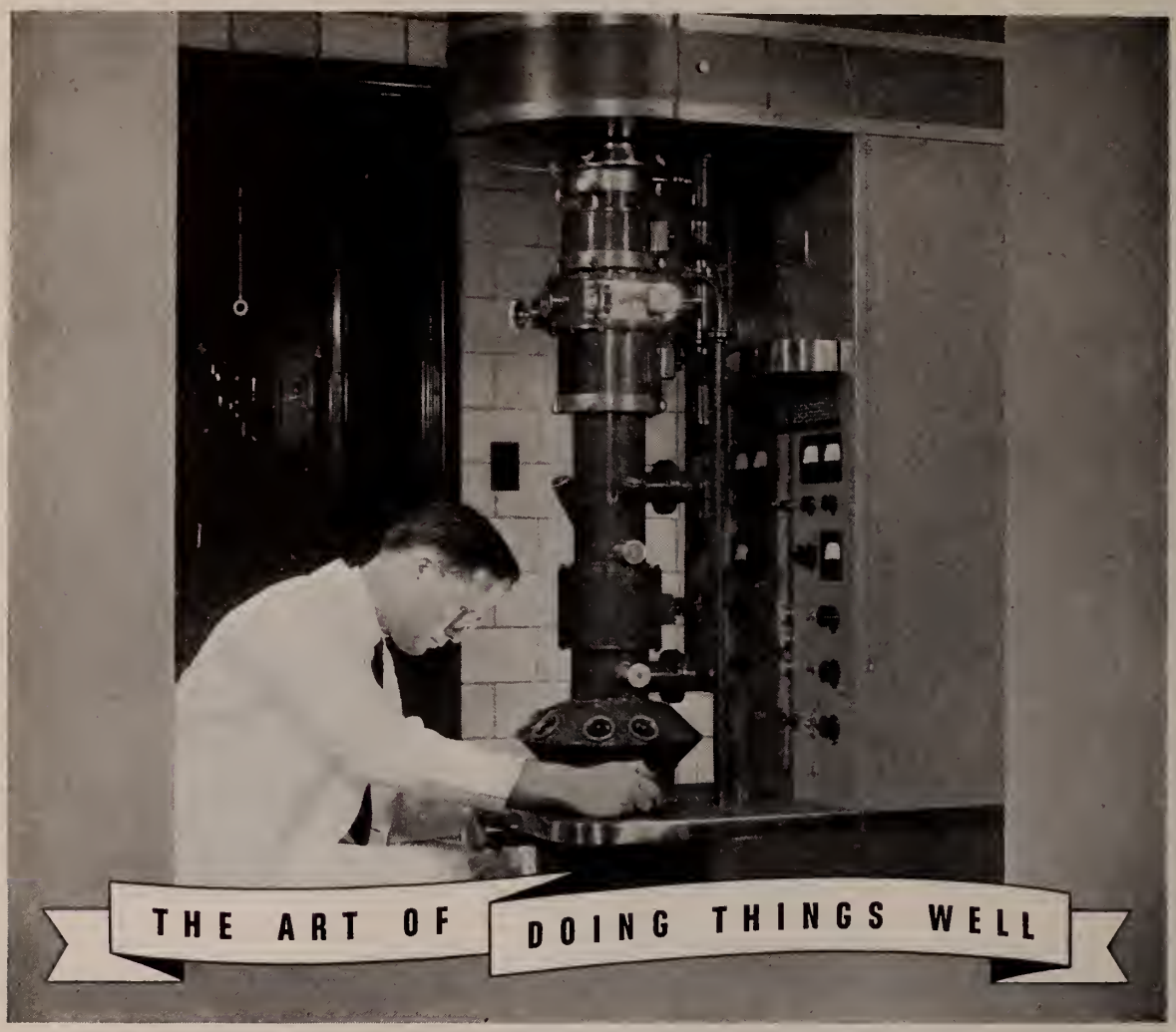
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The Illinois Medical Journal

July, 1942
VOL. 82, NO. 1

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

ILLINOIS MUST SUPPLY MORE PHYSICIANS FOR THE ARMED FORCES

Under date of June 27, 1942, a statement from Paul V. McNutt relative to the procurement of physicians was published in the Journal of the American Medical Association. Reference was made once more to the lagging in medical enlistments and it was stated frankly that the results so far are below the number expected by June 1st, and unless voluntary recruiting progresses more rapidly, some more rigorous form of selective service must be resorted to. Failure of a sufficient number of physicians to volunteer for military service is not spread thinly over the whole country, but there is acute lagging in some populous states while others have supplied nearly all of their quotas. More than 20,000 additional physicians will be needed before the end of the present year, and the majority of these must come from eight states, — New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio. These states should supply approximately 16,000 of the desired number by the end of the current year.

Mr. McNutt stated that the seriousness of the deficit in the number of physicians available for military service should not be underestimated, and the deficit must, *and will be met.* The supplying of the desired number of physicians for the armed forces must necessarily affect medical practice, especially in the rural communities, but it must be realized that we have an emergency and the people will be compelled to modify their previous standards of adequate medical care for the duration. Unnecessary needs must be minimized to make it possible for those actually needing medical care, to receive it under the present plan of minimizing the number of physicians for the various communities. Mr. McNutt believes that an educational program is necessary, as one of the principal reasons for the lag in enlistments has been due to the fact that many physicians do not thoroughly appreciate the actual needs of the armed forces.

Illinois, with approximately 12,200 physicians registered, must bear its share of the load, and from information which has been received, it seems quite probable that one third of the physicians of this state must be commissioned in the medical corps of the armed forces before the end of the present year. This will entail some hardships, and it is going to be necessary for some communities, previously having several physicians in their midst, to be supplied with their essential medical care by one physician. Industry, likewise, may be compelled to operate its medical departments with a reduced force, and perhaps replace, temporarily, younger physicians with others with physical impairments, and those beyond the age limit for military service.

A challenge has been made, and once more Illinois must do all that is expected of it. The desired quota of physicians for the various services must, and will be met.

THE 1943 A.M.A. MEETING

Even though there is gasoline rationing along the Atlantic Coast and it is becoming more difficult each week to procure railroad reservations going east, the A.M.A. meeting held at Atlantic City June 8-12 was indeed well attended and there was genuine interest on the part of all who were present. The total registration of physicians for the meeting was slightly more than 8,000 which was most gratifying.

This was indeed a war meeting, and one was reminded constantly that our Nation is at war. The programs were featuring subjects pertaining to modern warfare and casualties, while the business meetings were to a considerable extent pertaining to war medicine in its various phases.

Large convoys of ships were seen protected by planes and destroyers to show that in spite of the many casualties as a result of seacoast shipping the traffic must go on. Atlantic City at night was not the same as for recent meetings in that the world famous board walk at night was not illuminated brilliantly as in the past, but the physicians present all realized the necessity for that precaution and no one seemed worried or disappointed.

Among the highlights of the meeting were the two appearances of Paul V. McNutt who told of the urgent need of many more physicians in the armed forces, and he expressed the hope that under the present systems for procuring the necessary medical personnel, medicine itself would be able to solve this big present day problem. One of the addresses made by Governor McNutt was published in the June 20, Journal of the American Medical Association, and it should be carefully read by every physician in our country.

As has been the case at previous meetings in recent years, the vast scientific exhibit was a most popular part of the meeting, and thousands of physicians were constantly looking over these many exhibits, quite a few pertaining to medicine and the war. The usual fracture demonstra-

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tions once more were highly popular, and the opinion was frequently expressed by many that fracture care should be more definitely standardized and simplified especially in connection with war work.

Quite a number of motion picture theaters were constantly in operation and the attendance was unusually good — there being standing room only for many of these demonstrations. The recently improved colored pictures add materially to the interest in this form of medical education which invariably carries a most popular appeal.

For the first time this meeting featured special programs for the general practitioner, and these sessions proved to be greatly appreciated and well attended. Once more the meetings of the House of Delegates were conducted with a minimum waste of time, with many highly important matters being presented for discussion and subsequent action. The conferences or "hearings" held by the reference committees, were well attended and several of these committees were in session most of the time in order to give everyone a chance to express their individual opinions, and better enable the committee to make the desired type of report back to the House.

The 1942 meeting had been scheduled as a meeting of the American Nations, and although many physicians from neighboring American countries had to cancel plans to attend on account of the war, there were approximately 140 physicians registered from these other countries.

Another interesting feature was the large number of physicians present who were wearing army or navy uniforms. Col. Fred Rankin who was inducted as president on Tuesday evening, wore his uniform as Colonél, and he has for months past been active in the office of the Surgeon General of the United States Army at Washington. General Magee, the Surgeon General, was present during part of the business meetings and delivered an address before the House of Delegates.

At the closing meeting of the House on Thursday afternoon, James E. Paullin of Atlanta was elected as President-elect, Wm. J. Carrington, Atlantic City was elected Vice-president, Olin West re-elected as Secretary and General Manager, and Herman L. Kretschmer of Chicago as Treasurer to succeed himself. H. H. Shoulders of Nashville and Roy G. Fouts, Omaha, were re-elected as speaker and vice-speaker respectively, of the House of Delegates for another year.

Everyone in attendance at this outstanding meeting was thoroughly impressed with the fact that medicine today has a big job ahead, and all were sincere in the belief that the job can and will be done, and that medicine too, realizes that at this time it is an "all out for victory" program which will permit the complete achievement of those aims of our country.

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Correspondence

"OLD TIMER" IS YOUNG OF HEART

To The Editor:

The Government is making an urgent appeal for the younger men in medicine to join the army and the statement has been made repeatedly that physicians are not responding so readily now, as we did 25 years ago when the first call came for physicians to join the army. The writer at that time was relatively young in practice, and although I was not subject to the first call, being slightly above the upper draft age, I did leave a good practice and am thankful that I saw service overseas, and later, with the army of occupation until ordered to return home for my honorable discharge.

Today we know a number of young physicians who are within draft age, but who do not want to join the medical corps because they are enjoying a good practice, and perhaps have purchased a large home on a monthly payment basis, and fear that they may lose their property if compelled to go. Yet, few of these men realize that their fine home will not be theirs if this country is invaded and overcome through lack of defense at home. The money they are accumulating will be worth nothing if we are conquered in this present allout struggle.

I well recall the old adage learned in the grades years ago that what is worth having, is worth fighting for, and that is a principle which should be deeply instilled in the hearts of the younger physicians of today. They are indeed most fortunate in having the opportunity that was not afforded many of we older men, in receiving a modern medical education in the best medical schools in the world, then the benefits of an interneship and frequently today, a residency following the completion of the interneship.

Some of the younger men believe they should be permitted to take a two or three years residency following their interneship so they can qualify for approval by one of the increasing "American Boards," yet they fail to realize that Uncle Sam will give them an experience that they will be proud to have had, in later years, and which in the opinion of many will be worth more to them than any residency now available.

We frequently hear the expression "what can we older men do," and it is my firm belief that right now we can do our bit by encouraging the younger man to heed the call of Uncle Sam, and *join now*. Then again many of us who have not delivered babies into the world in many years, can take a short refresher course in obstetrics, and forget that we are specialists, and once more become general practitioners for the duration.

I would like to recommend an organization of we old timers to encourage enlistments, so that such appeals as was made recently by Hon. Paul V. McNutt at Atlantic City will not again be necessary, and that, like late in 1918, the War Department will say the supply of physicians in the armed forces is entirely adequate, and we do not need further enlistments.

Sincerely,

A. H. L., M.D.

The tuberculosis problem in industry cannot be divorced from tuberculosis in the general population. Saranac Lake Symposium on Tuberculosis in Industry, 1941.

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

There were many important problems presented and discussed at the meeting of the House of Delegates of the American Medical Association in Atlantic City.

Perhaps one of the most important addresses made was by Paul V. McNutt, Federal Security Administration of Washington, D. C. This address was printed in the June 20th issue of the American Medical Association Journal. Mr. McNutt called attention to the lack of volunteers for military service under the Procurement and Assignment Organization, and stated that in the first six months of this war there were only 3,000 volunteers as compared to 12,000 in the first six months of World War I. He frankly stated that unless Procurement and Assignment furnished the necessary number of medical men to take care of the armed forces some other method would soon have to be put into force. Mr. McNutt did not state, and the writer, up to the present time, does not know how many men in the Selective Service group filled out their Procurement and Assignment questionnaire and asserted their willingness to accept a commission. In addition, the writer has no available information as to the number who asserted such willingness, but did not apply for a commission when the application was sent to them through Procurement and Assignment. From various discussions of the members of the Procurement and Assignment Committee, Mr. McNutt's speech and other addresses one draws the conclusion that they do not question the willingness of doctors to serve or their patriotic attitude in the matter. There is a general feeling that the Procurement and Assignment as handled caused a great deal of confusion among members of the medical profession, and it has failed up to the present time due to this confusion; and the lack of proper technical organization in Washington to carry out this vast program that was suddenly thrust upon them after December 7th. It has been stated that a large amount of correspondence was not immediately taken care of, in fact, that the delay has been several months in many instances. Undoubtedly there are reasons for this delay but the medical profession as a whole should not be held responsible for the lack of the proper administration of Procurement and Assignment.

It has been obvious from the first, as stated by Mr. McNutt, that the armed forces will require thirty-three per cent of all our physicians and two-thirds of all those under the age of forty-five.

If applications for commissions had been sent out immediately to those asserting their willingness to serve much of the confusion and delay undoubtedly would have been avoided. There were a large number of physicians in the Selective Service age, to my personal knowledge, who felt and in most instances were advised that they would be deferred by Local Draft Boards because of dependents. It is obvious that such statements added to the confusion that already existed, and again should not be charged against the medical profession.

We have now been informed that all physicians in the Selective Service age, except those that have definitely been declared essentials, should make application for a commission. It would

seem that all physicians in this age group should make application for commission, and if physically fit should be given a commission, and deferment because of their falling into the class of essentials should be considered when they are actually called into the service. It is also generally felt that a large number of medical schools, hospitals and clinics have declared far too many of their staff, in the Selective Service age, as essentials up to the present time. This again has created confusion and will continue to create confusion under the present plan.

Procurement and Assignment was set up primarily to avoid putting square pegs in round holes and to protect the local population where it was advisable to retain a doctor in that community.

It is generally accepted that doctors entering the service are being placed in positions that they are best trained to fill and this, of course, has been a valuable contribution up to the present time. There has been very little criticism along the line that politics either in the profession or in Washington have played any important role in commissions granted. This again is a creditable accomplishment for which the Surgeon's General Offices must be given credit.

That there have been and will be some discrepancies in justifiable rank cannot be avoided, but apparently they are going to be held to a minimum.

It is apparent that real progress is being made at the present time and that much of the confusion and delay is being eliminated.

Procurement and Assignment, to function, requires the cooperation of all medical schools, and hospital groups in the entire profession and unless this happens it will be taken out of the hands of the medical profession and handled directly from Washington.

Another important resolution was presented to the House of Delegates by Dr. E. H. Cary, Texas, and this resolution is here quoted:

"WHEREAS, There is a unanimous acceptance by physicians of the United States that the seriousness and scope of the existing worldwide conflict demands the unreserved and unqualified devotion and sacrifice to the ultimate limit of individual ability and capacity; and

WHEREAS, An all professional agency, the Procurement and Assignment Service, has been established officially and entrusted with the all important task of providing professional personnel to meet civilian and military health and medical requirements for the period of the emergency; and

WHEREAS, It is considered that the assigning of this vast and vital responsibility to this strictly professional agency represents an unequaled tribute to and an unparalleled achievement of the medical profession; and

WHEREAS, The Procurement and Assignment Service functions as a department of government and embodies within its various corps area and state committees a predominant majority of the trustees and officers of national and state medical societies; and

WHEREAS, There is the prospect of the need for forty thousand, possibly fifty thousand, qualified physicians to serve directly with military forces; and

WHEREAS, The conditions under which physicians have been able to function in the United States provide the factor most nearly responsible for the relatively enviable position which medicine now occupies and which is enabling organized medicine to provide the personnel and professional competence that represents an essential, even vital, contribution of the war effort; and

WHEREAS, It is a chief responsibility of the profession to do its utmost to continue progressive technics in medical service which will provide opportunity for those physicians who are called to military service to reenter private practice under conditions which will insure continued progress and maximum effectiveness in civilian service; therefore be it Resolved, That we, the House of Delegates of the American Medical Association, place ourselves officially on record as recognizing our responsibility for making the utmost effort to preserve the elements of independence and freedom of action that will make possible the easy reentry of physicians to civilian practice. To this end we recommend that a definite part of each program of every component member medical society be devoted to a reconsideration of the traditions, the standards, the freedoms, the effects of the absence of restraints and outside control which have contributed so materially to American medicine's unequaled progress and vast achievements."

Because of its importance to American medicine this resolution passed the House of Dele-

gates with no opposition.

Another resolution on Approval of Activities of National Physicians' Committee for the Extension of Medical Service was presented by Dr. Thomas A. McGoldrick of New York. This resolution was as follows:

WHEREAS, The physicians of the United States, through the American Medical Association, unselfishly have devoted time, energy and continuously greater ability to building an organizational structure truly nationwide in scope, serving every town, village and hamlet in this country and devoted to the vital task of providing a more effective and a more generally available medical service than is provided anywhere else in the world; and

WHEREAS, These efforts, over a period of nearly one hundred years, have developed American medicine to the point of a general recognition of its worldwide leadership; and

WHEREAS, This unparalleled growth and this unusual effectiveness are the results of the high level of educational requirements, the high standard of ethics that has been maintained and the continuous safeguarding of the relationship between the physician and the patient; and

WHEREAS, We are now passing through a period of worldwide revolutionary change in social, economic and philosophic concepts; and the general public has been and is subjected to a vast educational propaganda, some of which tends to discredit the American doctor and to destroy confidence in the effectiveness of American medicine and in our system of distributing medical care; and

WHEREAS, Preservation of the vital principles responsible for medicine's past progress, its present effectiveness and its ability to serve the public most advantageously make it essential that citizens understand the basic facts in connection with American Medicine's methods, growth, achievements, the factors responsible for its superiority and the extent to which the people have been the beneficiaries of the professions intensive and constructive efforts; therefore be it

Resolved, That we register our approval of the activities of the National Physicians' Committee for the Extension of Medical Service, commend the board of trustees and the management of that institution for the efforts they have made to enlighten the general public in connection with American medicine's methods, progress and achievements and in pointing out that the public has a vital interest in the final results; and be it further

Resolved, That it be declared the policy of this House of Delegates to encourage this effort and similar efforts with identical purposes.

Like all resolutions this was referred to the Reference Committee. Many members of the House of Delegates appeared before this Reference Committee, many of the outstanding men in medicine, and also some of the members of the Board of Trustees of the American Medical Association and the resolution was thoroughly discussed by many of these men.

The Reference Committee brought in the majority report and the minority report on the above resolution. The majority report was as follows:

WHEREAS, The American physicians and the American Medical Association have been placed in a most favorable light before the American public by the activities of outside groups of individual physicians assisted by business firms, entirely independent of organized medicine; therefore be it

Recommended, That the House of Delegates of the American Medical Association hereby express gratitude and deep appreciation for the outstanding service rendered its members and its official organization by these groups.

Dr. H. A. Luce, Michigan, presented the following minority report on these resolutions:

This minority report is an unqualified endorsement of the resolutions as introduced.

After considerable discussion given by many of the outstanding men in the House of Delegates the minority report was approved by a large majority.

It seemed to the writer who listened to the discussions and had an opportunity to talk with many of the men regarding the National Physicians' Committee that there was a general feeling that it was very essential that the work of the National Physicians' Committee, not only, be approved and carried on but that more vigorous activities should be developed. The approval of this resolution will have the effect of removing a great deal of the confusion that has previously existed relative to the attitude of the American Medical Association and the House of Delegates relative to this matter.

It is hoped that physicians will realize the importance of this and rally to its support, that we may preserve our present system of medical care both for ourselves and for the American people; and that our doctors accepting commissions in the armed forces will have the assurance that we are going to keep up the battle after their absence.

R. K. Packard, M. D., Chairman
Committee on Medical Economics

INCREASED LONGEVITY

Some time will elapse before the new 1940 Census figures are released showing exactly what is happening to population in the smallest cities of less than 10,000 and among farming and non-farming people in rural neighborhoods. The population analysts think that non-farming people of country neighborhoods will prove to be increasing faster than the farmers.

It is estimated that the largest absolute increase in population, 5,273,000, is among middle-aged people in the 45- to 64-year group. This is the group said to have increasing trouble in finding work in industrial plants and commercial establishments. Rapid growth of this part of the population is seen aggravating the already serious problems of teaching older workers new tasks.

The oldest group of Americans, people of over sixty-five years, are also increasing at a rate which equals the growth of the entire nation fifty years ago. These elderly people, who are apt to be not entirely self-supporting, will continue to increase at about the present rate for 20 or 30 years.

It is almost certain that in the nation as a whole the proportion of the population living in rural areas has increased for the first time in the history of the Census.—*Science.*

SEVEN MILE JUMPS

Defense against bombers is speeding ahead in medical research laboratories these days as well as in airplane and anti-aircraft factories.

At seven or eight miles up in the night air, planes can elude searching beacon lights, anti-aircraft guns and fighter planes, to drop bombs on sleeping cities and vital factories or rail centers, then speed safely away.

Occasionally a plane dropping destruction from 35,000 to 40,000 feet above the earth's surface does not get away safely. The flyer whose plane is disabled at these sub-stratosphere heights cannot be saved by his parachute alone. He would die on his way to earth even if he lived long enough to make the jump and pull the rip-cord of his 'chute. Pilots can only fly at these heights because their planes are equipped with oxygen tanks.

When they are forced to bail out, they must leave this life-protecting equipment behind. Unless they carry their personal supply of oxygen with them, they might just as well not try to jump. It takes nearly 15 minutes to get down from 35,000 feet or 40,000 feet to a level where the oxygen pressure will be high enough for the parachute jumper to live. Emphasizing this danger to the pilot, Dr. Walter M. Boothby, of the Mayo Clinic, states:

"If he gets into a dogfight up in those high altitudes, and his plane bursts into flames, he is a gone duck unless, after bailing out, he can be kept alive for at least 10 minutes with oxygen until he floats down to the 18,000-foot level."—*Jane Stafford in Science News Letter.*

ACCIDENT

Toward the end of 1939, a curious accident occurred in the laboratories of the International Health Division of the Rockefeller Foundation in New York (not to be confused with laboratories of the Rockefeller Institute for Medical Research, although both occupy the same premises). An outbreak of distemper-like disease developed among the ferrets used in the studies of Influenza A. In order to prevent the spread of the infection, a vaccine was made from the organs of some of the animals which had just recovered from influenza and had come down with the distemper; and this vaccine was injected into a large number of normal ferrets. When these vaccinated ferrets were later inoculated with the influenza A virus, they were found to be immune.—*Raymond B. Fosdick, in the Rockefeller Foundation Review,* 1940.

TOTAL WAR

The striking feature of the casualty list, however, is the high proportion of fatal injuries. It was fairly constantly found that about 40% of those sufficiently hurt to be termed casualties had been fatally injured — a proportion much higher than in ordniary battle, and requiring some explanation. The explanation is to be found in the age and condition of the victims, the nature of the injuries, and the number of factors which may operate in one case. A battle is fought by young men in good physical health, but civilian air-raid casualties include the old and infirm, and the very young and sensitive. In battle a single bullet or part of a shell may cause considerable injury without hitting a vital part, while in air raids one vital part at least is likely to be damaged by the common crush injury. Again, when people are caught in the wreckage of a house many secondary missiles are formed by fragments of the building. In addition there are the dangers of asphyxia from burial in debris or from inhaling clouds of dust, the peril of poisoning from escaping gas, the risk of fatal burning in the ensuing fire or scalding by steam from broken pipes, and there is the effect of severe shock induced by the pressure of heavy and not easily removable structures pinning down the victim.—*V. Zachary Cope, M.D., British Medical Journal, April* 5, 1941.

Medicine's Role in the War Effort

SAYS PUBLIC MUST AID DOCTORS IN MEETING NATION'S WAR NEEDS

Unreasonable Demands On Physicians' Time And Preventable Disease Must Be Reduced To A Minimum, Paul V. McNutt Declares

Preventable illness and unreasonable demands on the time of physicians must be reduced to a minimum because of the urgent need for physicians for the armed forces, Paul V. McNutt, chairman of the War Manpower Commission, declares in a special statement for *The Journal of the American Medical Association* on "The Procurement of Physicians." The statement, published in the June 27 issue, is as follows:

"On June 8 I described to the American Medical Association at its Atlantic City meeting the acute need for physicians for the military services. I pointed out how far the recruitment of physicians lagged behind expected quotas. In conclusion I stated bluntly the fact, which could not have been evaded by any analysis, that unless voluntary recruitment progressed more rapidly some more rigorous form of selective service must be resorted to.

"Those facts were necessary in order to permit the medical profession to diagnose its own case. And the case is urgent; physicians are members of what is probably the most indispensable of all professions. Despite the harshness of the facts and the bluntness with which I had to state them, I felt that the profession should be informed.

"In fairness to the recruitment record of many of our states, it seems in order at this time to give the profession some further idea of how its problem is distributed. The failure of a sufficient number of physicians to volunteer for military service is not spread thinly over the whole country. There is an acute lag in certain populous states. Other states have supplied nearly all that they should supply.

"We need more than twenty thousand additional physicians by the end of this year. But eight states — New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio — should account for nearly sixteen thousand of that shortage.

"By contrast, sixteen states have fewer than a hundred physicians to go to reach the total number they should supply. In order not to deplete unduly available medical service in those areas, we are asking that the Medical Officers Recruiting Boards be withdrawn and that further enlistments from those areas be then discouraged except in the case of the men under 37 in the urban areas. Those states are Alabama, Arizona, Delaware, Idaho, Louisiana, Mississippi, Montana, Nevada, New Mexico, North Dakota, South Carolina, South Dakota, Utah, Vermont, Wyoming and Virginia.

"The acute problem for the next few months for those states is an equitable distrubtion of medical service within their borders. This will avoid the necessity for any consideration of plans to allocate doctors from other states to meet civilian needs.

"More than one hundred and thirty thousand physicians have returned their registration forms to the Roster for Scientific and Technical Personnel. Those forms are now being processed.

When that work is complete we shall be able to give the profession a more comprehensive report on the relation of available medical service to wartime needs.

"The seriousness of the deficit in the number of physicians available for armed forces should not be underestimated. The need must be met. It will be met by one method or another. Neither must we underestimate the serious drain this puts on available medical services in civilian communities. It will mean long hours and hard work — sacrifices which will multiply the deep debt that every community owes to its physicians.

"It cannot be met simply by multiplying the hours of the physicians who are left. There will be a real need to exercise every possible means for minimizing unnecessary medical services in order that the real needs may be met.

"It is my belief that the lag in recruitment has been due chiefly to the fact that the individual physician has not realized the genuine urgency of the need. Measures must be taken which will bring those home to every individual. This means that there will have to be some education of the general public. Preventable illness must be reduced to a minimum. Unreasonable demands on the physician's time must be reduced to a minimum. Thus only may available medical service adequately cover the needs."

An editorial in the same issue of *The Journal* says:

"Elsewhere in this issue appears a statement by Mr. Paul V. McNutt, chairman of the War Manpower Commission, under which the Procurement and Assignment Service for Physicians, Dentists and Veterinarians functions, relative to the urgent need for physicians for the armed forces at this time. Mr. McNutt recognizes the indispensable character of the physician for both military and civilian needs. He makes clear that eight states — New York, Illinois, California, Pennsylvania, Massachusetts, New Jersey, Michigan and Ohio — must supply most of the physicians needed for the armed forces at this time. Some of the states have already supplied so many physicians in proportion to their total medical population that recruitment in those states is to be discontinued now or in the near future.

"The medical profession cannot be accused of failure to play its part in any way in relationship to the war effort. Every one who is participating in the recruitment of physicians recognizes that there have been what are now called innumerable 'bottle necks' to be cleared away from time to time as the effort has progressed. More than one hundred and thirty thousand physicians have already returned the registration blanks sent out by the National Roster of Scientific and Technical Personnel. These replies have been coded, and punch cards have been made for them. Any physician who has failed to receive an enrolment form from the National Roster should write at once to the National Roster of Scientific and Technical Personnel, in care of War Manpower Commission, 916 G Street Northwest, Washington, D. C., requesting that an enrolment form be sent to him.

"Shortly there will be sent to every physician who indicated that service in the United States Army Medical Department would be his first choice or his second choice a letter as follows:

WAR MANPOWER COMMISSION
Procurement and Assignment Service
Washington

Procurement and Assignment Service for Physicians, Dentists and Veterinarians

Dear Doctor

You have indicated your willingness to serve the Nation in this great emergency. The Procurement and Assignment Service of the War Manpower Commission now calls on you to enter the Service. Please apply at once for a commission. You have been selected from among the available physicians in your community by a process that is believed to be fair and impartial.

Complete and mail the enclosed post cards immediately. The Office of the Surgeon General or his representative will provide the necessary application forms and authorize the time and the place for your physical examination.

Do not take any definite action regarding your practice until you receive specific instructions from the War Department. Each physician who is commissioned is routinely allowed fourteen days to wind up his affairs after receipt of orders from the War Department.

The rapidity of recruitment now in effect makes this communication necessary and requires your full cooperation. Please do not delay.

Sincerely yours,

Frank H. Lahey, M.D.
Chairman, Directing Board
Procurement and Assignment Service

Enclosures No. 92 6/22/42

"With this letter will be enclosed two postal cards, which will secure prompt action in rela-

tionship to the receipt of application forms and proper notification of the action taken in the responsible agencies in Washington.

"The needs of the armed forces for physicians are immediate; unquestionably those needs will be met. Physicians who are under 37 years of age and who have been classified by the Selective Service are susceptible to restudy of their situation and reclassification as these needs become more and more urgent. The medical schools, hospitals, public health departments, industrial concerns, in fact every agency utilizing the services of physicians, must cooperate by restudying the men classified as essential, so that only those who are actually essential in the most restricted sense of that word will be retained. All others must be made available as needed for the service of the nation in the armed forces.

"The Procurement and Assignment Service for Physicians, Dentists and Veterinarians was established to aid in the proper assignment of physicians in times like these to the tasks for which they are best fitted. Already this agency has been of immense value in the principles that have been adopted relative to the maintenance of medical education, hospital service and civilian health, as well as the study and evaluation of men for the Army and Navy medical departments. As the needs become more acute and the number of men available less, their task assumes increasing importance. The War Manpower Commission is now the agency under which the Procurement and Assignment Service functions. Through the activities of various subcommittees such problems as maintenance of essential staff members for hospitals, the determination of adequate medical service for the civilian population needs, of adequate personnel for urban, county, state and national health departments and the needs of industry are being given special consideration. The medical profession, as Mr. McNutt has repeatedly emphasized, has in these activities shown the way to scientific study and allocation of manpower in this emergency."

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PLANS TO COMBAT EPIDEMICS

Surg. Gen. James C. Magee has announced that the fifth meeting of the Army's civilian board of consultants on problems of communicable diseases has been concluded. Established in January 1941 by order of the Secrtary of War on recommendation of the Surgeon General, the Board for the Investigation and Control of Influenza and Other Epidemic Diseases in the Army consists of a central body of seven leaders in the fields of research on infectious diseases and epidemiology. These members, all of whom were present at this meeting, are Dr. Francis G. Blake of Yale University School of Medicine, Dr. O. H. Perry Pepper of the University of Pennsylvania Medical School, Dr. Alphonse R. Dochez of Columbia University College of Physicians and Surgeons, Dr. Ernest W. Goodpasture of Vanderbilt University, Dr. Kenneth F. Maxcy of the John Hopkins University School of Hygiene and Public Health, Dr. Andrew J. Warren of the Rockefeller Foundation and Dr. Oswald L. Avery of the Rockeller Institute for Medical Research.

During the past year nine commissions have been organized and put into operation under the direction of the board. At the current meeting all directors of these commissions attended as follows:

Dr. O. H. Robertson, University of Chicago Medical School, Commission on Cross Infections in Hospitals.

Dr. M. H. Dawson, Columbia University College of Physicians and Surgeons, Commission on Hemolytic Streptococcal Infections.

Dr. Thomas Francis Jr., University of Michigan School of Public Health, Commission on Influenza.

Dr. Perrin H. Long, Johns Hopkins University School of Medicine, Commission on Meningococcal Meningitis.

Dr. Colin M. MacLeod, New York University College of Medicine, Commission on Pneumonia.

Dr. John R. Paul, Yale University School of Medicine, Commission on Neurotropic Virus Diseases.

Dr. Wilbur Sawyer, Rockefeller Foundation, Commission on Tropical Diseases.

Dr. Joseph Stokes Jr., University of Pennsylvania, Commission on Measles and Mumps.

Dr. Stanhope Bayne-Jones, Yale University School of Medicine, Commission on Epidemiological Survey.

Through the board and commissions the services of one hundred and sixteen consultants are available to the Surgeon General for advice and investigations on all problems of infectious diseases in relation to the health of the Army. The board and commissions carry out their work in direct association with the Preventive Medicine Service of the Surgeon General's Office. The meeting was attended also by representatives of all the services and many divisions of the Surgeon General's Office and by members of the staff of the Army Medical Center and the Army Medical Museum.

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NATURALIZATION OF NONCITIZENS IN THE ARMY

The War Department has directed (Circular Letter No. 120, April 24, 1942) all commanding officers to take action to facilitate the naturalization of noncitizen members of their commands who desire to become citizens and, for this purpose, to establish

liaison with the nearest district office of the United States Immigration and Naturalization Service. To be eligible for naturalization under the provisions of the act cited in Circular Letter No. 120, a noncitizen in the army must have been lawfully admitted into the United States or its possessions and must have been a resident there at the time of his entry into the service. He must have given honorable service for at least three months, be of good moral character and, in the opinion of his immediate commanding officer, would make a loyal and useful citizen of the United States. The requirement of at least three months' service may be waived when the applicant is scheduled to depart for overseas service. Naturalization procedures will be completed before departure for overseas for all noncitizens desiring to become citizens. Noncitizens in training at replacement training centers who desire to become citizens will be naturalized before their reparture from the replacement training center. All noncitizens passing through reception centers will be sent to replacement centers and will not, except under unusual circumstances, be sent direct to units from reception centers.

The requirement of three months honorable service during the present war will be waived for noncitizens who were former citizens of the United States and who lost their citizenship by reason of service in the armed forces of an allied nation during the first world war or second world war.

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ARMY APPLICATIONS OF DENTISTS

The Army is now prepared to accept applications of three thousand dentists who are in class 1-A of the Selective Service, according to a memorandum from Sam F. Seeley, executive officer of the Procurement and Assignment Service. Applicants should write immediately to the Surgeon General for application forms. Only those in class 1-A need apply. They need not wait for notification by their board to appear for induction examination. The sooner a man enters the service, the greater his opportunity to advance as the army expands. Every candidate will be cleared through the Procurement and Assignment Service.

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VETERINARIANS, IF DRAFTED, TO BE COMMISSIONED

The Procurement and Assignment Service announced that the veterinary service is now completely staffed and has a large reserve of officers which is adequate to meet the needs for the rest of the calendar year. For this reason there are no vacancies in the Veterinary Corps of the U. S. Army. However, the civil need for veterinarians is great and it is desired that no veterinarians be inducted into the military services in the capacity of enlisted men. In order to conserve all veterinarians in a professional capacity, the Surgeon General of the Army has announced that any veterinarian who is inducted will receive a commission if he meets the professional requirements. Therefore any veterinarian who has been drafted should apply immediately to the Office of the Surgeon General for the necessary forms for application for a commission.

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COMMISSIONS FOR MEDICAL STUDENTS

The War Department issued the following instructions, May 12:

1. Reference is made to War Department Immediate Action letter AG 210. 1 MA-AUS (4-25-42) RB-SPGA, May 8, 1942, above subject (See THE JOURNAL, May 23, p. 352):

2. The following instructions are published relative to the action to be taken in reference to students who are members of the R. O. T. C. advanced course in R. O. T. C. units of the arms and services other than Medical Corps and who become accepted matriculants in an approved medical school.

a. Students who, prior to entrance in an approved medical school, will have completed all requirements for a commission, including summer camp training, will be commissioned in the arm or service in which training was received.

b. Students who, prior to entrance in an approved medical school, will have completed all requirements for a commission except training at the appropriate service school, will be governed by the following:

(1) Where the date of entrance in an approved medical school will permit, students will be required to attend the prescribed course at the appropriate special service school. On successful completion of this course, they will be commissioned in the arm or service in which training was received.

(2) Where the date of entrance in an approved medical school will not permit, attendance at the appropriate special service school will not be required and students will be permitted to withdraw from their advanced course contracts for the convenience of the government.

c. Students who enter an approved medical school prior to the completion of the senior year of the R. O. T. C. advanced course will be permitted to withdraw from their advanced course contracts for the convenience of the government.

3. Students who, under the above provisions, are commissioned in an arm or service other than the Medical Corps, will not be ordered to active duty except as provided for in the letter referred to in paragraph 1, above.

4. Students who are permitted to withdraw from their advanced course contracts for the convenience of the government will not be required to refund any sums previously paid to them as commutation of subsistence.

By order of the Secretary of War:

J. A. ULIO
Major General,
The Adjutant General.

CHECK ON EFFECTS OF ARMY TRAINING

The War Department announced on May 25 that about twenty thousand enlisted men will be retested to determine the effect of training on a solider's score in the general classification test. This test, which is given to every man on induction into the service, is designed to test his ability to learn and not his educational background. Its chief object is to serve as a guide to classification officers in assigning men to work and organizations for which they are best qualified. About five thousand of the enlisted men will be retested at replacement training centers prior to their assignment with field forces. This will afford a check on the effect of training given at replacement training centers.

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THE NAVY NEEDS PHYSICIANS

Qualified physicians may still apply for appointment in the United States Naval Reserve. Rear Admiral Ross T. McIntire states that the Navy needs many more physicians, especially the younger men. The physician has free choice at the present time of applying for service in either the Navy or the Army. If he desires to apply for service in the Navy, he should communicate with the director of Naval Officer Procurement in his naval district. The Bureau of Medicine and Surgery will be pleased to advise any physician of the address of his director of Naval Officer Procurement if the address cannot be obtained otherwise.

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STUDENTS MAY ENLIST AS ENSIGNS IN THE NAVAL RESERVE

The Navy has not completed its quota of ensigns, H-V (P), U. S. Naval Reserve (medical students and premedical students accepted for admission to the next convening class in medical colleges). The recruitment program for appointments in class H-V (P), U. S. N. R., will be continued. Senior medical officers in various offices of Naval Officer Procurement will be pleased to cooperate with the deans of medical schools in aiding students to apply for appointment in this classification.

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ILLINOIS PHYSICIAN CITED FOR BRAVERY IN JAVA

Major Leon E. Robinson, Aledo, now stationed with the medical staff of the headquarters, U. S. Army forces in Australia, has been cited for outstanding performance of duty under fire in the campaign in Java, newspapers reported on May 20. The citation from Col. E. L. Eubank, of the army air corps, commended Major Robinson for his "splendid performance of duty while serving as senior medical officer of the nineteenth Bombardment group during the recent campaign in Java."

THE ANATOMICAL EXTRAS

Egad, egad, and a loud forsooth!
Tonsils, appendix and wisdom tooth!
Nary a one is dutiful
To the body beautiful,
(For all of that, I might say smugly
The same is true of the body ugly.)
None performs a task or service,
Unless it is to make us nervous;
They're standard equipment for every one:
Pater, mater, daughter, son,
Uncle, nephew, niece, and aunt;
Abraham Lincoln, U. S. Grant,
Rockefeller, Ford and Bendix —
Each had tonsils and appendix.
Spinster, widow, beau and belle,
All have wisdom teeth as well.
The guests unwelcome, the guests uncouth —
Appendix, tonsils and wisdom tooth.
Scientists, with deep chagrin,
Wonder why God put them in,
But smiling clerics say Jehova
Had a little sand left over.

—Dow Richardson,
New York Sun

In planning the battle strategy against tuberculosis we need to keep in mind important traits or characteristics of the enemy. We have had a recent taste of dealing with an enemy of slimy cunning, hiding under a cloak of diplomatic conversations. Tuberculosis is another such foe; sneaking, insidious and stealthy. No policy of appeasement or of diplomatic negotiation will accomplish results. Either this must be an "all-out" war or it will be one of the comic opera variety. Another characteristic of this foe is the habit of striking hardest where resistance is least. To conquer such a foe we must be fully prepared, well armed. We must attack on a wide front and not merely by launching two-man submarines. Mathew Woll, Pennsylvania's Health, Feb., 1942.

GOUT—A FORGOTTEN DISEASE

(E. L. Tuohy, Duluth, in *Minn. Med.*, April)

Gout is practically as enigmatic as when Sydenham had it and described it. We cannot deny its familial tendency and constitutional background. Uric acid is deposited in the tissues in certain areas. Rich, fatty diets and alcohol (beer and ale) precipitate attacks. These attacks come in individuals with a certain background of gouty diathesis. The disease does not kill and is therefore lost, for the most part, to statistical enumerations. The x-rays offer little in the way of positive selective criteria. Colchicine as a therapeutic test in acute attacks is the most reliable diagnostic measure — more determinative than either hyperuricemia, the presence of aural tophi, or bursitic accumulations. Gout is a disease ideally suited to sharpen the physician's clinical acumen and judgment. Without these faculties it will be frequently overlooked.

Original Articles

SPEECH OF ACCEPTANCE OF THE PRESIDENCY, ILLINOIS STATE MEDICAL SOCIETY

EDWARD H. WELD, M.D.

May 21, 1942

I appreciate the honor you have conferred in making me President of the Illinois State Medical Society.

This gavel represents the authority of this Medical Society and is accepted with pleasure, apprehension, and with faith. Pleasure because I have working with me a great body of earnest, conscientious, scientific men, with but one aim. The good of his fellow man. Apprehension because of the unrest in the world today. The medical profession is meeting these changes with courage. Therefore, I have faith. Faith that we as a profession will make definite plans, better plans if possible and work together in this changing world. These plans may have to be changed from day to day, but let us have plans, broad-minded plans, never "thinking ourselves exclusively in the right and others exclusively in the wrong."

For the past two years your honorable now Past-President, Dr. Charles Phifer, has labored unceasingly for your benefit in the hope of directing the activities of medical service in the large Social Security groups. Probably no man in our Society could have done as much as Dr. Phifer has done, because he had over ten years of valuable experience in the medical relief of Cook County. He has guided the medical program for the Aged and Dependent Children to the best of his ability. I believe he has done a good job and I believe that he is still doing a good job, for this part of the program is growing in size and importance every day, and I trust he will continue to serve as he has in the past. I believe that we, as physicians, owe him a debt of gratitude that we can never repay. The problems for the coming year are many. Under the leadership and guidance of the American Medical Association, and that great councilor and friend, Frank Lahey, the Procurement and Assignment Service for physicians has been established.

Dr. Phifer, as chairman of the Sixth Corps Area, has given unceasingly of his time and energy to help iron out the many problems that daily accumulate. Your Secretary, Dr. Harold Camp, as State Chairman, has lead and directed the State Committee aided by the committees in each county so that this Procurement & Assignment of physicians could be carried out in an acceptable and responsible fashion without wrecking the medical service of any community, and yet secure for our armed forces the best possible medical service. Our chief problem for the coming year is that of WINNING THE WAR. I know that the medical profession has been and is doing its part to that end.

Because of the war necessity we see an ever increasing demand for centralization. The practice of medicine has not escaped. It is not only our duty, but it is our privilege to cooperate in every way possible to give better medical service, and we should and must be ever watchful to see that the medical profession guides and directs the course of the practice of medicine, and that it is never used as a political football.

At times the local county society wonders why the State Society does not do something about

the wrongs and injustices that may or may not be real, and other groups wonder why the American Medical Association is not more vigorous in its endeavor to stamp out injustices. Might I remind you that we all depend upon our county units, and that each county unit has the beginning of many injustices or maladjustments which should first be considered there. We still have Lodge and other group insurances carried on by reputable physicians in all of our communities for less than minimum fees. We see a growing demand on the part of industry to supply its employees with medical service of all kinds, vitamin pills, sun baths, x-ray of teeth and physical check ups, often carried out by contract physicians at the plant. These are but a few of the instances that I might point out. These are some of the things that should be discussed frankly in our unit meetings. We should know more about the viewpoint of the factory management than we do now. I am sure that much will be gained by a frank discussion of all of these problems with all of the people that are concerned.

As I have said, these are changing times. History is being made. The problems, the character of the medical service and the facilities for medical service in your own county are changing every month. Would it be asking too much if we were to ask each County Society Secretary to write each year a history of his own County Society. I do not anticipate a history of bygone days, but a record of the activities for the year of each County Society and its members, those in the service and those that have passed beyond. This would lay a foundation for a real and living history of the physicians in Illinois, and in this time of war we should not forget our records. I am sure that the Woman's Auxiliary will help if they are asked, and I invite your kind consideration that the Illinois State Medical Society actively begin to write its own *present day* history.

Let us not dwell too much upon the past; let us not worry too much about the future, but let us by all means DO OUR WORK TODAY in the best possible manner. Now may I read to you a poem from the Sanskrit given to Sir William Osler by de Haviland Hall which expresses a Way of Life better than any words of mine. It is entitled "Salutation of the Dawn."

Listen to the Exhortation of the Dawn!
Look to this Day!
For it is Life, the very Life of Life.
In its brief course lie all the
Varieties and Realities of your Existence;
The Bliss of Growth,
The Glory of Action
The Splendour of Beauty;
For Yesterday is but a Dream,
And To-morrow is only a Vision,
But To-day well lived makes
Every Yesterday a Dream of Happiness,
And every To-morrow a Vision of Hope.
Look well, therefore, to this Day!
Such is the Salutation of the Dawn.

PERFORATED PEPTIC ULCER

Coexistent With Hemorrage From Another Ulcer

LOUIS P. RIVER, M.D., F.A.C.S.

AND

JOHN W. HOWSER, M.D.

OAK PARK

From the Cook County Hospital and the department of surgery, Loyola University Medical School Chicago

The serious acute complications of peptic ulcer are hemorrhage and perforation. The incidence of hemorrhage has been variously estimated, most writers agree that it occurs in from 10 to 20 percent of all cases of ulcer. The mortality of massive hemorrhage is high, running between 25 and 50 percent. Perforation occurs in from 10 to 15 percent of peptic ulcers. Again, the mortality is high, averaging perhaps 27 to 28 percent.

Formerly it was believed that multiple peptic ulcers occurred infrequently. Winters[4] found only 3 in 361 reports. Later reports[11] lead us to believe that approximately 8 to 10 percent of all peptic ulcers, as studied at necropsy, are multiple.

Events capable of producing unusual emotional or physical tension are usually found to precede either hemorrhage or perforation. Such a history has been cited by Davies[1] as occurring in 84% of all acute perforations or hemorrhages of peptic ulcers.

Thus in a case of multiple ulcers, the predisposing factors responsible for hemorrhage in one ulcer may well contribute to perforation in

another. It is not uncommon for perforation to occur as an additional complication in the already bleeding ulcer. Behrend[2] believes this happens in about 4% of all perforation cases, Winters[3] in nearer 10%. McNealy[5] states that 12% of perforated ulcers have been bleeding or bleed with perforation.

The occurrence of 2 or more ulcers at the same time allows speculation as to the possibility of one ulcer perforating, during or immediately following active hemorrhage from the other. Wright-Smith[6] reports fatal hemorrhage from a posterior ulcer following perforation of an anterior one. Further, the possibility of simultaneous perforation of multiple peptic ulcers is of interest. Austin[7] reports such a case, and Masson[8] in a review of the literature reveals that only 33 such cases have been reported. One of us (L.P.R.) has operated upon a patient with apparently simultaneous perforations of kissing pre-pyloric ulcers. In this patient at operation two hours after perforation, the posterior ulcer would not have been discovered and closed, had not the condition of the patient, the location of the perforation and slight surrounding area of induration, not led to excision, after which the posterior perforation was seen.

The coexistence of perforated and bleeding multiple doudenal ulcers has been reported by Berg.[9] He mentions a case in which fatal hemorrhage occurred from a posterior ulcer six days after successful repair of a perforation of an anterior duodenal ulcer.

We have recently observed two patients with multiple peptic ulcers, in which acute, free perforation occurred in one ulcer during hospitalization for severe hemorrhage from another coexistent ulcer. In neither case was there bleeding from the margins of the perforation.

CASE REPORT 1

L. R. a white male of 48 years of age was admitted to the Cook County Hospital on March 6, 1941. His complaint upon admission was essentially weakness and massive hematemesis of three days duration. *Past History*: Previous to 1939 he had been well, a heavy user of alcohol and tobacco and had eaten rich, spicy and greasy foods all his life. In 1939 he had a hematemesis and tarry stools, was treated conservatively for bleeding peptic ulcer and recovered. Following this episode he had followed a modified Sippy diet. The remainder of the history was not relevant. *Physical examination*: upon admission to the hospital showed a white male, acutely ill, temperature 100.2, blood pressure 124/76, pulse 112. respiratory rate 24. Eyes: sclera suggestive icterus. Heart: aortic 2 greater than pulmonic 2. Abdomen; slight deep tenderness in the epigrastrium. Normal peristaltic sounds. *Laboratory Examination*: Wasserman, negative; hemoglobin 24%, red blood cells 1,490,000 per cubic m.m.; white blood cells 11,200 per cubic m.m., Differential; neutrophils 89% lymphocytes 5%, monocytes 6%. 3 plus polychromataphilia and hypochramataphilia.

A diagnosis of bleeding peptic ulcer was made; treatment consisted of bed rest, morphine sulphate for sedation, nothing orally, saline and glucose subcutaneously and repeated transfusions of whole blood intravenously. Under this regime the bleeding continued, the patient continued to feel weak and restless. On March 9, at about 5 A. M. he complained of sudden, violent severe right upper quadrant pain colicky in character, and spread within a few minutes to the entire abdomen.

Physical Examination at this time showed a moderately distended abdomen, diffusely tender throughout, and severe boardlike abdomnal rigidity. The peristaltic sounds were absent and the liver dullness obliterated. There was free air under the diaphragm fluoroscopically, a red blood cell count of 2,150,000 per cubic m.m., and a hemoglobin (Tallquist) of 55%. Because of the poor condition of the patient, operation was deferred, adjuncts in the way of support were given, two more 500cc. blood transfusions and subcutaneous fluids continued. Thirteen hours after perforation operation was performed under local field block. At operation a perforated ulcer was found on the anterior duodenal wall, with considerable spillage of gastric contents. The perforation was closed with interrupted linen sutures, and because of the poor condition of the patient, no further exploration was done. The postoperative condition was poor; in addition to usual care he was given more whole blood intravenously, but expired on the first postoperative day. Autopsy on March 10, 1941 showed multiple (2) peptic ulcers of the first part of the duodenum, one anterior, one posterior. The anterior ulcer had been surgically closed with interrupted linen sutures. The posterior ulcer showed a vessel opening into the base of the ulcer crater and a recent thrombus present in the lumen of the vessel.

CASE REPORT 2

E. M. a colored male age 37, was admitted to the Cook County Hospital on June 6, 1940. His complaints upon admission were massive hematemesis of 6 days duration, melena and weakness. *Past History*: revealed that the patient had a known peptic ulcer of six years duration. He had been on medical

management consisting of a modified Sippy diet for this period and until the present illness had had no serious trouble. *Physical Examination*: on admission revealed a poorly nourished colored male, appearing weak and acutely ill. Temperature 99.4, pulse 104, respiratory rate 20 and blood pressure 120/70. Eyes: conjunctiva pale, Heart: Systolic blow at the apex. Abdomen, active peristaltic sounds (24-30) per minute, no tenderness, no rigidity. Rectal: full of melanotic stool, proven by benzidine test. Other findings normal. *Laboratory Examination*: Wasserman, negative; Urinalysis; normal, Blood: Hemoglobin 19%, red blood cells 1,390,000 per cubic m.m.; white blood cells, 9,200 per cubic m.m.; Differential; neutrophils 79%, lymphocytes 17%, monocytes 4%. A diagnosis of bleeding peptic ulcer was made, the patient given nothing orally, repeated whole blood intravenously, saline and dextrose subcutaneously, absolute bed rest and morphine sulphate for sedation. Although he continued to bleed, he began to feel better except for a slight gnawing pain in the epigastrium which became more severe. On the morning of June 10, while the attending physician was making rounds, the patient complained of a sudden, severe, violent, excrutiating pain over the entire abdomen, more particularly in the epigastrium, colicky in nature, replaced in a few minutes by severe aching, continuous para-umbilical pain. Immediate examination at this time revealed a board-like, rigid abdomen, with no peristaltic sounds and diffuse tenderness throughout. Fluorscopy showed pneumoperitoneum. A diagnosis of perforated peptic ulcer was made and 45 minutes later operation was performed under field block with 1% procaine through a transverse right rectus incision. A perforation 4 m.m. in diameter was found on the anterior surface of the pyloric region and a moderate amount of clear fluid was seen and removed from the abdomen. There was no bleeding from the edges of the perforation although the patient was actively bleeding at the time of operation. No second ulcer was seen. The pyloric vein was not identified. The duodenum was not palpated between the fingers. A fixation suture of linen was used to close the perforation, reinforced with interrupted Lembert sutures of linen. Anatomic closure of the abdomen was done with interrupted black silk sutures.

Following the operation the patient continued to bleed. He was treated as prior to operation, and the bleeding stopped spontaneously. The patient left the hospital 3 weeks after operation with no further complications.

When one is confronted with a patient who has the clinical and laboratory findings of a perforated ulcer, superimposed upon and coexistent with a bleeding peptic ulcer, the possibility of multiple peptic ulcers must be considered. Repair of the perforation will not necessarily stop the bleeding from the other as suggested by Berg.[9]

The diagnosis of such a condition at the time of operation is not easy. In many cases of persistent bleeding ulcer one can not demonstrate the ulcer at operation. In the presence of an acute perforation from a different ulcer, with the induration and perforative peritonitis which is present, the demonstration of a bleeding ulcer is doubly difficult.

We propose that inasmuch as most of these cases are of the "kissing" ulcer type, one anterior, the other on the posterior wall in juxtaposition, existence of the posterior ulcer can be demonstrated. This may be done following a suggestion by Meyer[10] who uses the similar maneuver for ascertaining the exact situation of the common duct prior to resection of the pylorus. This point of technique consists in palpation, through the foramen of Winslow, of the posterior wall of the duodenum and pylorus This should be done prior to the repair of the anterior ulcer, because suturing and resultant thickening of the anterior wall may obscure the finding of induration of the posterior wall. Discussion of the treatment of the bleeding ulcer is not within the province of this report.

SUMMARY

1. Simultaneous or coexistent hemorrhage and perforation occurring in multiple peptic ulcers is found in a small percentage of cases.

2. A case of simultaneous perforation of kissing prepyloric ulcers is briefly noted.

3. Case reports of two patients with multiple ulcer and simultaneous or coexistent hemorrhage and perforation are presented.

4. In a patient who has been bleeding from a supposed ulcer prior to the advent of the perforative phenomena, palpation through the foramen of Winslow is of value in an effort to demonstrate a posterior ulcer.

715 Lake St.

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THE TREATMENT OF PERNICIOUS VOMITING OF PREGNANCY

Our mortality in 110 consecutive patients with severe hypermesis gravidarum admitted to the hospital from 1928 to 1934 was 5.5% and our incidence of therapeutic abortion in the same series of patients 17.3%. With improved treatment during the past six years we have had no deaths in 115 equally ill patients and an incidence of therapeutic abortion of only 2.6%.

Formerly we used the accepted treatment for this condition. The patient was hospitalized in complete isolation from friends, family, and husband. She was kept in bed in a darkened single room without a special nurse. No emesis basin was left by the bed. After a cleansing enema pentobarbital was given by rectum and repeated often enough to maintain the patient in a somnolent condition. Opiates were avoided. An initial hypodermoclysis of 1,500 cc. of normal saline was followed by sufficient daily amounts to maintain fluid balance. An intravenous drip of 5 to 10% glucose was given slowly and repeated every 8 to 12 hours to total 1,000 to 1,500 cc. a day.

In the last six years we have added to the above treatment forced feeding with the Levine nasal tube and have witnessed a striking improvement. The feedings have been carried out as follows:

Hours

0 Levine tube passed and stomach gently washed a small amount of warm water.
½ Murphy drip started. Four to 6 oz. milk containing 2 heaping teaspoonfuls Harris' Yeast concentrate.
1½ Four to 6 oz. orange juice sweetened with Karo corn syrup.
2½ Six oz. rich egg-nog made with cream and egg.
3½ Milk and Harris' Yeast concentrate as above.

Each feeding requires about 40 minutes. Repeat the routine until 14 out of 25 hours are completed. At the same time thiamin cloride, ascorbic acid, and liver extract have been given intra-muscularly.—*Frederick C. Irving, M.D., Virginia Medical Monthly, December, 67: 717-724, 1940.*

MIND OVER MATTER

"The race with confusion and complexity may be desperately close, but intelligence will still persist in trying to find answers to the urgent questions which confront our time."—*Raymond B. Fosdick, in the Rockefeller Foundation Review, 1940.*

EPIDEMIC DIARRHEA OF THE NEWBORN

Certain interesting aspects of an outbreak of epidemic diarrhea of the new-born are worth reporting. The outbreak occurred in a general hospital at a time when there was an unusual prevalence of so-called "acute epidemic influenza" in the general community. The mother of the first case had had the "flu" just before admission and had a temperature and a dry cough before and for a few days after delivery. The baby was kept in the general nursery and taken to the mother for breast feeding. The first symptoms appeared on the fifth day. Following the first case there occurred explosively within the general nursery fifteen successive cases of epidemic diarrhea of the new-born, five of whom died.

Outstanding clinical features of the epidemic were the small thin watery stools of not the usual voluminous watery type and the sudden prostration with convulsions and cyanosis in several cases suggesting more an intracranial than resiratory or intestinal involvement. At autopsy marked cerebral edema was found.

Because influenza and diarrhea of the new-born seemed curiously to coincide it was decided to give three of the more severely ill new-borns 30 cc. of citrated blood intramuscularly from an individual convalescing from influenza. The clinical response in all three cases was dramatic and undeniable, in a few hours the temperatures were much lower and the infants were clinically much improved.

We realize the dangers of reporting only three cases and of discussing such ill defined clinical pictures as epidemic influenza and epidemic diarrhea of the newborn. The latter condition is probably caused by a number of agents. In this epidemic it seemed to us highly probable that the etiologic factor was the virus of epidemic influenza because of the prevalence of "flu" in the community and the response of the patients to convalescent serum.—*Thomas G. Folsam, M. D., and George M. Lyon, M. D., Southern Medical Journal, March, 33: 1167-1171.*

SULFAGUANIDINE NOW AVAILABLE

Sulfaguanidine, the water-soluble sulfanilamide derivative which is distinguished by the fact that it is not absorbed readily by the stomach or intestines and accumulates in the colin in relatively large quantities, is now available commercially. A new drug application filed for this product under section 505 of the Federal Food, Drug and Cosmetic Act has been allowed to become effective.

A fifth derivative, sulfadiazine, still awaits an official "go ahead" signal, understood to be set for some time this month.

In addition to these five, which have proved clinically valuable, several thousand other derivatives have already been synthesized and in many cases preliminary tests have been made.

Sulfaguanidine is being distributed by Lederle Labs., New York City, under U. S. Patent 2,218,490, issued to its parent firm, American Cyanamid Company, and by E. R. Squibb & Sons, N. Y. C.—*Drug Topics, June 2, 1941.*

House of Delegates

Illinois State Medical Society, May 19-21, 1942, Springfield.

FIRST SESSION

(Tuesday Morning, May 19, 1942)

The first session of the House of Delegates of the Illinois State Medical Society was held in the Knights of Columbus Building, Springfield on Tuesday, May 19, 1942.

The meeting was called to order at 3:50 P. M. by the President, Dr. Charles H. Phifer, Chicago.

The President: The first order of business is the report of the Credentials Committee.

Dr. E. P. Coleman, Canton: The Credentials Committee has certified 72 delegates from downstate, 46 from the Chicago Medical Society, and 16 members of the Council, a total of 134. Mr. President, I move you that these delegates constitute the House of Delegates for this session. (Motion seconded by Dr. E. E. Davis, Avon, and carried).

The President: The next order of business is the roll call by the Secretary. The Chair will entertain a motion that the signed attendance slips constitute the roll call for this session.

Dr. R. K. Packard, Chicago: I so move. (Motion seconded by Dr. L. O. Frech, Decatur, and carried).

The President: The next order of business is the approval of the minutes of the last annual meeting.

Dr. W. E. Kittler, Rochelle: I move that the minutes as published in the July 1941 issue of the Illinois Medical Journal be considered the official minutes. (Motion seconded by Dr. John J. Pflock, Chicago, and carried).

The President: At this time I would like to present to you the President of the American Medical Association, Dr. Frank H. Lahey.

Dr. Frank H. Lahey, Boston, Mass.: Mr. President and Members of the Illinois State Medical Society: I do not want to occupy too much of your time because I know the amount of work which a House of Delegates has to undertake and because I shall speak to your group tomorrow morning.

(Dr. Lahey's further remarks covered points of interest to the medical profession generally.)

The President: Thank you very kindly Dr. Lahey.

The next order of business is the appointment of Reference Committees. The following Committees have been appointed:

Committee on Credentials: Drs. E. P. Coleman, Oscar Hawkinson, and W. W. Fullerton.

Committee on Attendance: Drs. H. E. L. Timm, Charles Stoll, W. E. Kittler, and W. C. Blaine.

Committee on Reports of Officers (President; President-Elect; Secretary-Treasurer; Chairman of Council): Dr. G. H. Mundt, Chairman, E. E. Davis and T. B. Williamson.

Committee on Reports of Councilors: G. E. Johnson, L. S. Reavley, and J. P. Simonds.

Committee on Reports of Standing Committees: (Public Relations, Medical Legislation, Medico-Legal, Medical Education and Hospitals, Medical Benevolence): Drs. P. R. Blodgett, T. A. Bryan, and W. E. Kittler.

Committee on Reports of Council Committees: Committee "A" to receive reports of Educational Committee, Scientific Service Committee, Medical Economics Committee, and Veterans' Service Committee: Drs. D. B. Pond, Jacob Albright, and G. H. Edwards.

Committee "B" to receive reports of Committee on Maternal Welfare, Fifty Year Club, Post-graduate Service, and Committee on Archives: Drs. Frank F. Maple, G. R. Ingraham, and A. H. Bitter.

Committee "C" to receive reports of Committee on Medical Care of Public Assistance Recipients, and Committee on Inter-professional Relations: Drs. G. W. Post, C. H. Hulick, and Charles Allison.

Committee "D" to receive reports of Committees on Tuberculosis, Cancer Control, Physical Therapy, Venereal Disease Control, Industrial Health, and Child Health Problems: Drs. L. O. Frech, O. Hawkinson, and R. K. Packard.

Committee on Report of the Editor, Scientific Work, Social Security Problems, and Medicine and the War: Drs. Robert Hayes, W. J. Gillesby, C. M. Rush.

Committee on Resolutions: Drs. M. Pfeiffenberger, J. J. Pflock, and F. H. Muller.

Committee on Miscellaneous Business: Report of Woman's Auxiliary, and other reports or matters referred by the President: Drs. R. R. Ferguson, Frank Deneen, and H. F. Bennett.

I wish at this time that the Chairmen of Committees will announce the day and hour of each Committee meeting.

The next order of business is the Annual Reports. These have been printed in the Handbook, but it is your privilege to supplement the reports. Each report was called for in turn.

REPORT OF THE PRESIDENT

To The Members of The House of Delegates:

This has been a very busy but a most interesting year. As President, I have attended many meetings and addressed many gatherings, both lay and professional, in this state as well as a number of neighboring states. It is most gratifying to note the splendid spirit with which the entire medical profession has faced the new crises which it has been called upon to meet. The uncertainties of war and, to a great degree, the disruption of normal life, have merely served to bring about a united front in our ranks. The majority of our men are more than willing to make the sacrifices necessitated by military service.

I would like first of all to commend the work of the Council during the past year. I have attended all its meetings and the efficient manner in which the large and varied volume of business has been handled has been most laudable. Each member has had additional personal and civic responsibilities placed upon him during this time, in spite of which all have give unsparingly of time and enthusiasm to the problems before it — particularly those involved in the defense program and the care of the indigent in this State.

I am deeply grateful to all the committees, as groups and as individuals, for their support. Each has had a definite objective, and each has fulfilled its obligation to the fullest extent.

There is everywhere evident an increasing interest in the scientific advances in medicine. This has not been obscured by the necessity of devoting attention, first and foremost, to our Medical Preparedness program and the problems arising in the care of the indigent. The role of medicine in the national defense program has gone through several transitional stages, most of which are known to you. Our members have been active on selective service boards, to which they are contributing generously in time and knowledge, and in this there has been an unusually fine spirit of co-operation.

The declaration of war on December 7th precipitated many acute problems. The creating of the Procurement and Assignment Service by the President of the United States ,drew together into one group, physicians, dentists, veterinarians, hospitals, medical educational institutions, and many liaison groups, through which the medical needs of the Army, the Navy, essential industries and the civilian population are to be supplied. This Service is now the official source through which all governmental medical needs are to be met. The fact that present Army and Navy requirements will demand a large number of our members under the age of 45 will call for many sacrifices on the part of physicians and their families, and it is to the honor of our profession that so many in the group past 50 years of age have not only offered their services but have tried by every means possible to be accepted for active service. Illinois, with more than 11,000 physicians, will be required to furnish many if its members to the armed forces.

The care of the indigent in this State continues to be a major problem, as it has been since the beginning of the depression. The prolonged heavy taxes, and the desire of the taxpayer to reduce his burden, has prompted the Legislature to transfer part of this load, e. g., Old Age Assistance and Aid to Dependent Children, from the relief load to the benefits available under the Social Security Act. This has helped reduce the cost to the State of Illinois, but has produced a new and complicated problem in the care of the indi-

gent in the State because of the fact that previous laws governing relief clients do not cover these people once they become recipients of Social Security Benefits. This transfers the responsibility for their care to a new administering agency, the funds of which are not as flexible as funds administered under previous emergency relief. The funds of this assistance agency are restricted by the fact that Federal money awarded a beneficiary of the Social Security Act must be paid directly to the recipient or his legally appointed guardian. The only way in which this clause can be changed is either by changing the Social Security Act, so that payment for medical care may be made to physicians, or by the passage of another law by the State of Illinois to provide supplementary funds by which payment may be made to physicians for medical services.

There is a great national tendency toward paternalism. There can be no doubt that under these conditions the number of persons throughout the country receiving these benefits will continue to increase.

Your Council appointed a Committee to collaborate with the Department of Public Welfare of the State of Illinois, to try to draft a medical program to cover these people under this administering agency and the laws regulating same. The Committee believes it has drafted one of the best medical programs of this type in the United States. The fees provided thereunder are more generous than those provided under most State programs of this type. It must always be remembered that these fees are for services rendered to an indigent group, and not those customary in other types of medical practice.

I am unalterably opposed to the socialization of medicine. There is, however, in my opinion a vast difference between a program of this type, designed to take care of a certain group, and carefully drafted and controlled by the medical profession with the full cooperation of the Department of Public Welfare, and one in which the entire population would be placed under a regimented program of medical care. It is hoped that the House of Delegates of the Illinois State Medical Society will weigh carefully the merits of the proposed program, giving due consideration to the following facts:

1. That we were asked by the Department of Public Welfare to help as a State Medical Society, in drafting a program for medical care for this group of people.

2. That the Advisory Committee was appointed by the Council to draft such a program.

3. That such a program must conform to the present rather stringent restrictions imposed by the Social Security Act.

It is within the power of the House of Delegates to approve this program or to reject it. The Committee realizes that it contains several features that are not as satisfactory to the medical profession as might be desired. The Committee wishes to point out, however, that if it is approved in its present form, the medical profession retains control of the program and can work to the end that these objectionable features may be improved or eliminated. Thoughtful consideration should be given to the question of leading and directing the program and trying to broaden the scope of the Social Security Act, which cannot be done without the support and co-operation of the medical profession as a whole; or, as a State Medical Society, fostering supplementary legislation in Illinois to make possible direct payment to physicians for their services.

Direct participation in the program of medical care should of course be optional with the individaul physician; but every member of organized medicine should be interested in present day trends of medical care. We should remember that the opportunity to direct this program has been tendered to us. If we reject the opportunity we cannot criticize its ultimate outcome.

The State Medical Society is a vital force to each of its members. Executive administration is a growing responsibility, demanding an awareness of national trends and discussion with governmental officials on many subjects pertaining to medicine, all of which necessitates the constant attention of its officers. These duties fall more heavily on some of its officers than on others. I am familiar with the constantly increasing scope of the many and varied duties of the secretary, the large number of committee and executive meetings he must attend, and the amount of time he must devote to travel. It is my opinion that his services are becoming more and more valuable to the conduct of the Society's affairs. To relieve him of much of the routine detail of his office, I believe consideration should be given to providing him with an assistant who can be trained under his supervision to take over part of his burden.

The Journal of the Illinois State Medical Society has undergone many changes during the past year, which we believe enhance its value greatly. The establishment of an editorial board, the careful study of scientific articles and editorials, and the censoring of its advertising, have tended to raise its standards. The addition of a department of pathologic reports constitutes an instructive and interesting feature. Its cover has been modernized, in fact its entire makeup has been streamlined, and it now takes its place among the leading state journals of medicine. In effecting these changes, the editorial board, the managing editor and the publication committee have rendered a valuable service.

The Scientific Service and Post Graduate Committee continue to do very excellent work. The medical profession receives, through the educational advantages offered by this committee, material that could be obtained in no other way. County Societies have the opportunity to present programs by distinguished cli-

nicians, and these meetings offer to physicians in the community, advantages of inestimable value. Efforts should be made by the local societies to stimulate interest in these programs, so that the attendance may warrant the expenditure of time and effort to which the contributors are put, and this is a matter to which both the Committee and the local societies should give careful consideration.

The function of the Educational Committee continues to expand in many instructive ways. It is impossible to describe the scope of this Committee in service rendered not only to the members of the Society but to the public as well. It has been highly gratifying to note the very complimentary tributes that have been paid to this Committee by many lay organizations for its valuable assistance in medical matters as they pertain to the laity. For the first time in the history of the Society, the Journal and the Legislative Committee offices, each of which has hitherto occupied widely separated offices in Chicago, are now housed in the offices of the Educational Committee of the Society at 30 North Michigan Avenue. During the past year Dr. Camp, our Secretary, has spent one or two days a week in this office, and the fact that he now has a Chicago headquarters makes it possible for many physicians from all parts of the State to confer with him, as well as the men in Chicago who have occasion to contact the office. This has added a great deal to the efficiency of administration. In this office, also, are handled thousands of telephone inquiries from the public, pertaining to health matters. For the capable attention to these details much credit is due to Miss McArthur and her assistants. Thus the Society is now rendering inestimable service not only to its members but to the public as well.

The Board of Public Health Advisory Committee has been closely allied to the activities of the Department of Public Health in the State of Illinois. Dr. Cross has repeatedly sought the guidance of this Society on matters which pertain to his Department. It is the opinion of the Council that through this contact, there has been closer co-operation between the Public Health Service of the State of Illinois and private practitioners of medicine, to the benefit of both.

There have been many legislative changes in recent years, particularly with reference to medical care of the indigent, with which the members of the profession as a whole have not had the opportunity to become familiar. I believe that a proper interpretation of these legislative changes would help solve many of the misunderstandings that exist regarding the laws that regulate the care of the indigent. This would permit a broader comprehension of the national trends pertaining to medical care. It is probable that there will never be a more timely opportunity for medicine to lead and direct these programs than there is at present.

Respectfully submitted,

Charles H. Phifer, M. D.,

President.

REPORT OF THE PRESIDENT-ELECT

To The Members of The House of Delegates:

I wish to thank the House of Delegates for the honor you have bestowed upon me in making me the President-Elect of your Society. During the past year I have endeavored to follow the various activities of your Society and to become cognizant in the recent trends in organized medicine, and of the revolutionary changes in the social conduct of the whole World, so that I might serve you and your cause with as few mistakes as possible.

I have attended all the meetings of the Council, and all the meetings of the Assignment and Procurement Physicians Committee, as well as various County and some State meetings.

I have, of course, been well aware of the enormous responsibility that has fallen to your President, Dr. Charles Phifer, and I am well aware of the very efficient manner in which he has disposed of the multitude of tasks that have come to him.

May I direct your attention to the activities of the Council? These men met at frequent intervals and gave their undivided and unselfish attention to the problems of your Medical Society. The results of these meetings and of other activities are passed on to various other components of the Society from time to time so that these components may be fully aware of all pending problems in the State Medical Society. It is with some surprise that I hear from Counties that are not aware of many of the happenings in the State Society. They have not kept abreast of the rapid trend of events. This is probably due in a large part to the fact that the meetings in the various County Societies are not held often enough so that these matters can receive the attention that they deserve. I believe that this is a matter that should receive the individual attention of every County Society.

I speak for the cooperation of all the officers of your Society and of every individual member of the Illinois State Medical Society, and I can assure you that I will do my best to try and maintain the highest possible service and ideals of organized medicine.

Respectfully submitted,

Edward H. Weld, M. D.

President-Elect.

REPORT OF THE SECRETARY

To The Members of The House of Delegates:

In our annual report one year ago we stated that 1940 had been one of the busiest and most trying in

many years. Supplementing this statement in regard to the work of the fiscal year now coming to an end, we desire to state the medical profession of Illinois and the country as a whole, has more serious problems today than the wildest imagination could have envisioned a short time ago.

With the attack on Pearl Harbor everything else was placed in a secondary position to our desire to do everything possible to aid our country. With war all around us and realizing that we have assumed a major role on all fronts, it is and will continue to be on the part of American Medicine, one continuous effort to do what is expected of us until this war is ended.

Medicine has played an important part in all wars in which our country has been involved from the days of the Revolutionary War when it was necessary that nearly every Colonial physician assume an important military duty. At that time the care of the civilian was given but little consideration. The United States is now planning the largest army in its history and we all know that the services of many thousands of physicians will be required. If this war should continue over a period of years it is quite probable that nearly every able bodied physician in the military age limits will be called to some form of service.

Within recent months the state and county Committees on Medical Preparedness (which have been endeavoring over a period of more than 18 months to get a fairly accurate picture of the medical man power of our state in the event of war) have assumed new responsibilities and have become Committees on Procurement and Assignment of physicians for our state. The state committee has met frequently to consider the many problems, duties and responsibilities which have been placed upon us. We have been most fortunate in having our president, Dr. Charles H. Phifer, who has been selected as Sixth Corps Area Chairman for Procurement and Assignment Service, meet with us and aid in this important work.

New files have been developed in the secretary's office so that a card is made for every registered physician in Illinois regardless of age, military status, membership, etc., as it is necessary that we aid the government in procuring all available information concerning physicians in this state. The county committees have been aiding in many ways, and especially in giving information concerning physicians within their respective counties. We have endeavored through bulletins from the secretary's office and through the columns of the Illinois Medical Journal to give the latest and most important releases which have come regularly to us from Washington.

The Council as a whole has assumed an important role in Procurement and Assignment Service. Each member has been asked to aid in the development of the new files which the government asks us to make and maintain constantly. Hundreds of Illinois physicians are now in the various branches of governmental service and with an urgent demand for perhaps more than 20,000 additional physicians for these services before the end of 1942, we can expect to see more than 1,500 of these men coming from the state of Illinois.

At the present time the demand is principally for physicians under the age of 36, while others under 45 will be accepted. Commissions will most likely be given to a number above the age of 45 who are especially needed as specialists in several of the branches of medicine, but the principal desire today is for the younger men. As this report is written the Government urgently needs a minimum of 6,000 physicians within the next six weeks for the army, 2,500 more for the aviation corps, and would like to have not less than 10,000 all of whom could be allocated to the several services within a short period of time.

THE COUNCIL

During the past year the work of the Council has been increased materially by the plans for determining the medical man-power, and by the many other unusual matters which have arisen. Then, the outbreak of war which necessitated some changes in regular routine and demanded not only special meetings of the Council, but also the devoting of much additional time to the various considerations which were referred to us from Washington. With the president and secretary of this Society delegated to assume important roles in the Procurement and Assignment Service for Physicians, the Council was asked to assume additional responsibilities in this setup.

The Government needs and must have many thousands of physicians, and Illinois with approximately 6½ per cent of the physician population of the country, must furnish a considerable number of physicians as its quota.

A number of additional committees have been appointed by the Council for special purposes all of which have functioned very well indeed.

The report of the Chairman of the Council will give interesting information concerning the work of the Council during the past year, and every member of this House of Delegates should read the report and be prepared to discuss it at the proper time.

MEDICAL CARE FOR PUBLIC ASSISTANCE RECIPIENTS

With the approval of the Social Security Act some six years ago and with the many people in every state receiving state and federal aid through its provisions, it was quite obvious that there would be some type of medical care program developed for those receiving this aid. Dr. Phifer, who has had many years of experience with the program for medical care under the Chicago Relief Administration, called this matter to the attention of the House of Delegates at the last an-

nual meeting and in his report recommended that the House give serious consideration to his suggestion that efforts be made to aid in the development of a suitable plan which under our present legal restrictions, would be satisfactory to the physicians of our state.

The House approved the report and recommended that the Council appoint a committee to meet with officials of the State Division of Public Assistance of the Department of Public Welfare, and endeavor to work out a satisfactory plan for providing medical care to the recipients of old age assistance and the program for aid to dependent children. Illinois has now more than 150,000 old age assistance clients and is paying benefits to approximately 50,000 dependent children. Medical care for these clients cannot be charged against the local relief agencies as they are not to be classed as paupers, although they have a most limited income.

The Medical Advisory Committee under the chairmanship of Dr. Phifer has met regularly with officials of the state Division of Public Assistance in an endeavor to set up a suitable program. Several unfortunate factors which prevented the development of a plan which would give everything the physicians desire, were encountered. It is impossible under the Social Security Act to pay physicians directly for this medical care, and charges for these services cannot be paid through the local governmental units under the existing laws.

During the long period of time this program was being developed many letters and reports were sent to all county medical societies and their medical advisory committees on public assistance recipients. Questionnaires were sent to each of these groups, and they were urged to make suggestions or constructive criticisms as the plans were being considered. District group meetings were held in each Councilor District to which the county society committees and officers were invited to discuss the proposed plan. On at least five occasions articles have appeared in the Illinois Medical Journal on this subject.

The big problem apparent to the committee was to determine whether it seemed advisable to aid in the development and operation of a plan which although not containing many things the profession would like, would be workable, or whether to ignore this completely, refuse to cooperate and see a plan developed which would be placed in operation whether approved by the profession or not, and over which the physicians would have no control whatever.

With more than 150,000 old age assistance clients in Illinois the amount of money allocated for medical care in 1941 totalled more than 5½ million. No adequate check was possible to show the exact amount of this huge sum which was actually spent for medical care. This factor was one which was given much consideration, and it was generally believed that the final program submitted to the physicians of Illinois would provide a means of more carefully checking on the amount actually paid to the doctors as compared with the appropriation for the purpose, and eventually would result in more remuneration for medical services on the part of the physician.

Each member of the House of Delegates is urged to read carefully the report of Dr. Charles H. Phifer as chairman of the Committee on Medical Care for Public Assistant Recipients, be thoroughly familiar with it and be able to discuss it before the House at this annual meeting. This is purely a matter for final action on the part of this House, and the action taken will be the policy of this Society.

THE SOCIETY

For the past two years it has been a pleasure to report a substantial increase in the membership of our society during the preceding year. On both occasions the actual increase happened to be the same, 219. This year your secretary is somewhat disappointed as the actual net gain over the number of members reported last year is only 213. However in these trying days, any increase in the membership is gratifying and the Society has gained 651 members in three years as of April 30, 1942.

The post graduate conferences were conducted during the present fiscal year, nine in all, with a marked interest on the part of all physicians present. The meeting at Belleville was conducted jointly by the Illinois and Missouri State Medical Societies, and was unique in that half of the speakers on the program were from Illinois and the other half were from Missouri. The attendance was good and everyone thought the experiment was well worth while. The tenth meeting tentatively scheduled for Kankakee was postponed on account of the many meetings held during the month of April and on account of the unusual demands on the time of physicians, all of whom are anxious to do their part in winning the war.

Quite a number of members have completed fifty years of practice and have been made members of the Fifty Year Club. For the first time since its organization, Dr. Andy Hall as chairman of the Fifty Year Club Committee has arranged for the first annual luncheon of the members to be held Wednesday noon, May 20th. Dr. W. A. Evans, known by nearly every member of this Society, now residing at Biloxi, Mississippi, and a member of this Club, expects to be present and participate in the interesting program which has been prepared. It seems most fitting that physicians who have been giving service to their patients over a period of one half a century should be honored by the rest of us.

THE ANNUAL MEETING

It has been somewhat difficult to make some of the necessary plans for this 102nd annual meeting largely on account of the war and the fact that Springfield as the capital city of Illinois has had to give up some facilities previously available for our annual meetings, to the Government "for the duration." Following the unusual attendance at the 1941 annual meeting held in Chicago where the toal registration was 4,109, and with the unusual program, largest list of exhibitors in the history of the State Society, it is going to be more difficult in the future to arrange annual meetings in our downstate cities. It has been a source of satisfaction however to those responsible for the arrangements this year that facilities were found available in Springfield, and we have every assurance of another highly successful meeting.

Several of the section officers who had been working on the annual meeting programs for several months have been called to service in the armed forces, and it has been necessary for the Council to select substitutes in each instance. The chairman and secretary of the Section on Medicine, the chairman of the Section on Public Health and Hygiene are all in service at this time. Several physicians who had tentatively agreed to participate in the programs are likewise in service, and this has caused some confusion, although we are happy to report that all programs are completely filled at this time, and the usual interesting papers may be expected.

COMMITTEE ON MEDICAL BENEVOLENCE

Dr. Nagel has been very active this past year as chairman of the Committee on Medical Benevolence, and his report should be of interest not only to the members of this House of Delegates, but also to the membership as a whole. The Woman's Auxiliary has aided again in the solicitation of funds to be added to the Medical Benevolence Fund as will be reported by Dr. Nagel elsewhere in this handbook.

DEATH OF PROMINENT MEMBERS

On July 1st of last year Dr. John Ross Neal, past-president and for many years chairman then executive secretary of our Legislative Committee, was taken from our midst, he having had a coronary attack some two weeks previous to his death. Dr. Neal was well known to all members of this Society and had always been present at both the meetings of the House of Delegates and at the meetings of the Council. This Society owes much to Dr. Neal who was an outstanding legislative chairman whose methods and suggestions have been followed by many other state medical societies.

The two oldest members of the Fifty Year Club in years of service died during the past year. Dr. O. L. Pelton, Elgin, who was graduated from the University of Michigan in 1872, had completed 69 years of practice, while Dr. J. M. McClanahan of Kirkwood, who was graduated from the old Chicago Medical College which later became Northwestern University Medical School had completed 67 years of practice, having graduated in 1874.

Quite a number of prominent members of this Society who have been not only interested in the welfare of organized medicine in this state, but who also have occupied prominent positions as officers, members of the Council or of the House of Delegates, have passed on to their reward. Among them are J. H. Finch, Champaign, a former vice-president, T. W. Gillespie, Victoria, for a number of years a member of the Council, T. H. Culhane, Rockford, for many years a familiar figure in this house of Delegates and also a past vice president, W. J. Benner, Anna, for many years county society secretary, a member of the House of Delegates, etc., W. D. Cutter, Chicago, Secretary of the A. M. A. Council on Medical Education and Hospitals, J. B. DeLee, outstanding in the field of Obstetrics and a member of our Fifty Year Club, George W. Hall, Chicago and C. L. Best, Freeport who for a long period of time was a leading surgeon in northwestern Illinois. There are others who have been prominent in Society affairs over a period of years whose names are not recorded here, but who will be missed in years to come, and who will be an inspiration to those of us who are permitted to remain.

THE ANNUAL AUDIT

A statement from the auditor is published in connection with the report of the secretary-treasurer, calling your attention to the financial condition of this society. Fred N. Setterdahl, Rock Island, has completed the audits for this society over a period of more than 20 years, and to him we are greatly indebted for the unusual interest he has shown in our affairs, as well as for the present system of accounting which is in operation in the secretary's office, as well as that of the Educational Committee and the Journal business office at 30 North Michigan Avenue, Chicago.

THE COMPONENT COUNTY SOCIETIES

It is our belief that more medical meetings have been held in Illinois during the past fiscal year than in any previous year. The county societies have been most cooperative and have responded regularly to the more than usual number of requests for various types of service, reports, and other demands which have come from this office during the present year. Many of these unusual demands are requests for service from governmental agencies as a result of the present war.

Several county society secretaries are now on duty in the army, navy or other branches of the service, and their places have been filled by other physicians anxious to carry on during the emergency.

Your secretary again desires to thank all of the county society secretaries, committees, and others who have so generously supplied all information which has been requested during the year. It is only through such a splendid type of cooperation that the affairs of our large society can be carried on satisfactorily.

MEMBERSHIP DATA

Members reported in good standing on April 30, 1941		8,217
Added during the year:		
New members	447	
Reinstatements	43	
		490
		8,707
Dropped during the year:		
By death	153	
By removal or resignation	50	
For non-payment of dues	74	
		277
		8,430
Net gain	213	

FINANCIAL REPORT OF THE SECRETARY

Receipts from County Societies

Adams	$ 460.00	Lee	192.00
Alexander	200.00	Livingston	296.00
Boone	88.00	Logan	200.00
Bureau	264.00	McDonough	200.00
Carroll	104.00	McHenry	184.00
Cass	136.00	McLean	152.00
Champaign	628.00	Macon	712.00
Chicago Medical Society	35,952.00	Macoupin	192.00
Christian	452.00	Madison	1,024.00
Clark	208.00	Marion	376.00
Clay	72.00	Massac	80.00
Clinton	128.00	Mason	80.00
Coles-Cumberland	384.00	Menard	40.00
Crawford	132.00	Mercer	80.00
DeKalb	392.00	Monroe	64.00
DeWitt	56.00	Montgomery	160.00
Douglas	272.00	Morgan	376.00
DuPage	600.00	Moultrie	72.00
Effingham	144.00	Ogle	176.00
Fayette	64.00	Peoria	1,402.00
Ford	224.00	Perry	120.00
Franklin	168.00	Piatt	112.00
Fulton	96.00	Pike	136.00
Gallatin	40.00	Pulaski	40.00
Greene	112.00	Randolph	144.00
Hancock	104.00	Richland	180.00
Hardin	64.00	Rock Island	800.00
Henry	376.00	St. Clair	906.00
Henderson	24.00	Saline	376.00
Iroquois	232.00	Sangamon	984.00
Jackson	144.00	Schuyler	48.00
Jasper	40.00	Shelby	136.00
Jefferson-Hamilton	304.00	Stephenson	296.00
Jersey	56.00	Tazewell	520.00
Jo Daviess	64.00	Union	272.00
Johnson	40.00	Vermilion	760.00
Kane	496.00	Wabash	80.00
Kankakee	552.00	Warren	184.00
Knox	368.00	Washington	80.00
Lake	240.00	Wayne	96.00
LaSalle	792.00	White	96.00
Lawrence	176.00	Whiteside	280.00
		Williamson	256.00
		Will-Grundy	160.00
		Winnebago	1,048.00
		Woodford	104.00
Total			$59,720.00

RECEIPTS AND PAYMENTS
May 1, 1941 to April 30, 1942

RECEIPTS

County Societies		$59,720.00
Subcriptions — Journal	226.35	
Advertising — Journal	26,253.26	
Exhibits — State Meeting	6,347.50	
Interest — Bonds, etc.	1,781.25	
Post Graduate Papers	233.00	
Medical Histories	40.00	
Refunds	71.78	
Mimeograph, etc. — Educational Committee	166.88	
Total Receipts		$ 94,840.02
Cash Balance May 1, 1941		74,190.91
Total		$169,030.93

PAYMENTS

Secretary's Office		$15,209.02
Council Expense	6,526.55	
Educational and Scientific Service Committees	13,619.94	
A. M. A. Meeting Expense	600.00	
State Meeting Expense	6,309.90	
Maternal Welfare Committee Expense	393.05	
Post Graduate Committee Expense	1,144.02	
Honorariums	500.00	
Legal and General Counsel Expense	1,047.47	
Legislative Committee Expense	9,255.71	
Journal	22,223.90	
Unemployment Insurance — Deposit	552.95	
U. S. Governments Bonds	10,000.00	
Various Committees and Miscellaneous Expense	396.51	
Total payments		$ 87,779.02
Cash Balance April 30, 1942		81,251.91
Total		$169,030.93

Respectfully submitted,

HAROLD M. CAMP, M. D.
Secretary-Treasurer.

FRED N. SETTERDAHL
LICENSED PUBLIC ACCOUNTANT
224 Robinson Building
Rock Island, Illinois

TO THE MEMBERS OF THE HOUSE OF DELEGATES:
ILLINOIS STATE MEDICAL SOCIETY
CERTIFICATE OF AUDIT

I have audited the following accounts of your Society for the year ended April 30, 1942:

Secretary's Office —Dr. H. M. Camp,

Educational and Scientific Service Committees — Miss Jean McArthur, Secretary.

Benevolence Fund — Dr. H. M. Camp.

SECRETARY'S ACCOUNTS —

Receipts: I have verified the dues received from the County Societies with duplicate receipts, the master ledger cards of each county and compared same with the Secretary's Report as published. The Journal collections have

been verified by reports from the Manager, etc. Other receipts consist of Exhibit Rentals, Journal Subscriptions, interest, etc. Receipts taken in for mimeographing work, etc., from the Educational Committee have been combined with the Secretary's receipts.

Payments: Payments are made by check and supported by approved vouchers, orders, invoices, etc.

The Funds are deposited in the name of the Society and bonds amounting to $50,000.00 are held under the custodianship contract by the State Bank and Trust Company of Evanston, Illinois.

During the year the Society purchased a Government Bond for $10,000.00 which is registered in the name of the Society and held by the Secretary. The bonds were verified by a statement from the bank and personal inspection of the bond held by the Secretary.

The records have been well kept in the various departments and in my opinion represent the true transactions for the year. I will furnish the Council with a detailed Audit Report.

Respectfully submitted,

FRED N. SETTERDAHL,
Licensed Public Accountant.

Dr. Camp: At the time I prepared my report I reported the death of Dr. John R. Neal, a past President. We were very much saddened on the sixth day of May to hear of the death of Dr. C. S. Skaggs, also a past President. He was born on December 25, 1877 and died May 6, 1942 in Carbondale. He graduated from St. Louis University College of Medicine in 1901. He was President of the Illinois State Medical Society in 1935 and President of the Southern Illinois Medical Society in 1933. For many years he was a delegate to the American Medical Association, and for more than twenty-five years a member of the House of Delegates of the Illinois State Medical Society. He was an ardent church worker, a member of the Methodist Church, and a charter member of the Kiwanis Club of East St. Louis.

I would like to move that a committee be appointed to draw up suitable resolutions on the deaths of Dr. John R. Neal and Dr. C. S. Skaggs.

(Motion seconded by Dr. E. E. Davis, Avon, and carried).

The President: I would like to have the House stand for thirty seconds in memory of these two men.

REPORT OF THE CHAIRMAN OF THE COUNCIL

To The Members of The House of Delegates:

The past year has been the most eventful and trying in the history of the Council. This has been due to the large number of new problems which have arisen, many of which are concerned with our war effort. While organized medicine has been thinking about preparation for war and really preparing for it since the New York meeting in 1940 there has been increasingly large amounts of survey and book work to be done. This has caused the Secretary's staff to be increased during this time.

Immediately after the last annual meeting two serious problems arose. One was really a carry-over from the past year and resulted from the death of Dr. C. J. Whalen in April, 1941. Almost the entire June meeting of the Council after strictly organization work had been accomplished was given over to plans for the improvement of the Illinois Medical Jurnal. These plans were as follows:

1. A carefully selected Editorial Board was appointed. Their duties were to aid the Editor and Journal Committee in reveiwing articles presented for publication in the Journal and helping to improve the number and character of original articles, so that they would cover a large range of subjects and be of interest to the greatest number of readers of the Journal. How well they have succeeded you all know.

2. The Journal Committee was given jurisdiction over the entire Journal, including advertising as well as editorial policy. They have spent a large amount of time in improving both the style of the Journal as well as the nature of the advertisers.

3. The appearance of the Journal was to be changed to be abreast of the times. How well they succeeded can be gauged by the many compliments received on the improved appearance of the last six issues.

4. Controversial subjects, unless of a strictly scientific nature, were not to be discussed editorially, since all editorials are considered the opinion of the Society as a whole and not those of any individual.

5. New Departments were to be added to the Journal in accord with the requests and suggestions of many of the members, as fast as possible.

The success of the above policies will no doubt be reviewed by the House of Delegates and the future policy will depend on their decision.

The sudden unexpected death of Dr. John Neal, for many years in charge of the Legislative Committee, first as Chairman and later as Executive Secretary, was the second major problem to confront the Council. Dr. Neal was very active in many lines other than the legislative field and his loss has been felt acutely in many ways. The continuation of the legislative work was deemed of greatest importance and after many meetings of a special Committee, the Executive Committee and the Council it was decided to hire John Neal Jr. to carry on this work for the year. All of the files of Dr. Neal were at hand and fortunately John Junior had enjoyed the confidence of his father as to the conduct of the work. A complete report of the work of the Legislative Committee will undoubtedly be presented at the annual meeting and again the House of Delegates will have the privilege of deciding as to the wisdom of the choice. At least nothing has occurred in the Illinois Legislature the past year, unfavorable to the medical profession.

To expedite the work the past year, an unofficial Executive Committee has been empowered to go over important matters presented to the Council and to present to the entire Council an abstract on the subject. This has expedited the work of the Council and made it possible to complete all of the work necessary at any one meeting in one day.

The Committee on Medical Care for Public Assistance Recipients, appointed at the last annual meeting by the House of Delegates has presented a report at every meeting of the Council. The Council has realized the controversial nature of the work, and the fact that this work is being carried on in new fields. As a result they have insisted that suitable publicity be given to the work of this Committee by articles in the Illinois Medical Journal, questionnaires to the Component County Societies, Bulletins from the office of the Secretary and also by holding informative meetings all over the state, usually at the Post-Graduate Conferences. An attempt has been made to explain that all this work must be carried on under a federal law. The Social Security Law, which can only be changed by federal enactment of a new law. No attempts have been made to exert pressure on any County Society or its members to accept the plan recently presented by the Department of Public Welfare. It is hoped that all of the members of the House of Delegates will come to the annual meeting with knowledge as to what has been printed in the Illinois Medical Journal during the past year and also with an open mind to hear all of the facts in regard to the reasons the proposed plan was tentatively agreed to by the Committee so that they can arrive at the proper solution of this most important question, which will undoubtedly be one of the chief matters of business.

The Committee on Medical Benevolence under the Chairmanship of Dr. John Nagel has made excellent progress in the work of furnishing assistance to disabled physicians and their widows. Every case has been carefully investigated and there is a gradually increasing roster of names who are receiving monthly assistance from this fund. This is undoubtedly one of the finest pieces of work the Illinois State Medical Society is carrying on and the Council deems it wise to continue and expand this work. It is to be hoped that gifts to this fund will increase both in numbers and amounts during the coming years.

The relations between the Illinois State Medical Society and the Department of Public Health, under the Director, Dr. Roland R. Cross have been most pleasant. Both have felt free to call upon each other for advice and suggestions as to matters of mutual interest and many conferences have been held on subjects of importance to the medical profession in the matter of Public Health. This is as it should be and the Council wishes to thank Dr. Cross for his cooperation and assure him that the Illinois State Medical Society desires this cooperation to continue.

Nine Post Graduate Conferences have been held in the past year, in accordance with instruction of the House of Delegates at the 1941 meeting. A tenth one was postponed on account of the war and tire shortages. One of the conferences was held jointly with the Missouri State Medical Association, at a point near the state lines. The program was furnished by both societies and was the most successful and enthusiastic ever held. It seems that in the future joint meetings might be arranged with other State Medical Associations at strategic points to the mutual advantage of both societies. The House of Delegates should decide whether it is best to continue these conferences during the war.

Dues of all members of the Illinois State Medical Society who are serving with the armed forces of the Government were remitted for the past year. This probably will be continued on a yearly basis for the duration of the war.

The Committee on Medical Preparedness worked all year preparing plans of how the medical profession of Illinois could best function in the event of war. Lists of all members, with their education and special work, were prepared and furnished to governmental agencies as requested. Later this Committee was renamed The Illinois Committee on Procurement and Assignment. The Council was appointed a special Liaison Committee between the State Committee and the County Committees all of whom have assisted in preparing information for the National Committee as requested. This work has become increasingly important as the demands for large numbers of physicians in the armed forces are increasing. At present it seems that the majority of physicians under the age of 36 will be needed during the current year and if the war effort increases possibly many in the group between 36 and 45 will be needed. At present is seems advisable for every man to fill out, if he has not already done so the questionnaire and enrollment blank sent out from the National headquarters early in April. It would appear advisable for all physicians under 36, who have no serious physical disabilities, to get their affairs in shape so that they can if and when called upon, respond promptly. Undoubtedly this subject will receive much attention during the annual meeting, for it is of interest to the entire medical profession.

The Council was called upon to assist in the planning for medical service in Civilian Defense. They met with the Director for Illinois, Dr. Cross and his assistant, Dr. H. L. Pettit, who has been loaned to the Civilian Defense Committee of Illinois for this work and offered them the aid of the medical profession of the state. Dr. Pettit has given all of his time the past three months to this work and the medical profession of Illinois has assisted him at all times. Although to many physicians, the geographical location of Illinois offers considerable protection from air raids, there is the ever present danger of sabotage and local catastrophes, which make the formation of definite plans to meet any and all emergencies advisable. We feel sure that the physicians of Illinois want Dr. Pettit to know that he can count of their continued cooperation.

The war with all its problems have made the arranging of this annual meeting most difficult. Changes in the officers sections, as well as in the program have resulted from men being called into service. Available space in Springfield has been curtailed by war activities. If accommodations are not up to the usual standard of Springfield it is not due to lack of effort and foresight on the part of the Committee on Arrangements and the Council, but the result of sudden changes in governmental affairs dependent on the war.

While it is incumbent on every American citizen to give his whole hearted assistance to the Government during the war, the medical profession must remember that with the present trend toward centralization of power in Washington, there is the possibility that the medical profession might be involved therein. Accordingly, we must be alert to any such procedure, meanwhile cooperating in every way toward the successful prosecution of the war effort. Our activities during this emergency can be of great assistance to us in the future planning for our work.

The financial condition of the Illinois State Medical Society continues to be excellent. With less dues in prospect for the coming year, as a result of remitting the dues of these members in military service and an ever increasing scope of activities, it is probable that our surplus will be dipped into during the coming year. This should not be the cause of any alarm, for it is for just such emergencies that we have been accumulating this surplus over the past several years.

The Chairman wishes to thank every member of the Council for his unqualified support and assistance during the past year. Also he wishes to thank the members of all Committees, and their Chairmen, in particular, for their fine work the past year. It is such cooperation that makes the work of the chairman pleasant. To the Secretary goes our especial thanks. His advice and assistance have been invaluable during the entire year. He always has time to furnish desired information and gives freely of his time and strength to the Illinois State Medical Society. His office is most efficient with small personnel and the service given is comparable to any in the nation.

Respectfully submitted,
E. S. HAMILTON,
Chairman of the Council.

REPORT OF COUNCILOR OF THE FIRST DISTRICT

To The Members of The House of Delegates:

The report of the Councilor of No. 1 district is most encouraging. I have succeeded in visiting each county and with exception of two counties the district as a whole is quite active.

Many of the societies meet once a month, while others meet every other month and the meetings on the whole have been very instructive and the spirit of the society good.

Two counties on the west of the district have a scattered and small membership and is rather hard for them to get enough together to justify bringing in someone from the outside. One county has had no meetings in the calendar year of 1941-42, but believe that it will take action soon to become more active. There has been no serious trouble in the district but a lot of discussion concerning Procurement and Assignment in the early stages, but this has been cleared up in great measure at this time.

It might be of interest to note, in view of the present call for physicians by the Army and Navy, the reactions of some of the larger counties as to voluntary enlistment among physicians.

As of this date: Winnebago out of a membership of 152 has 12 men in the service.

Kane county with 150 members has 10 men in the service.

McHenry county with 27 members has 7 men in the service.

Boone with 13 members has 1 man in the service.

DeKalb with 40 members has 3 men in the service.

It seems, therefore, that the response to the appeal for enlistment is not as high as might be expected.

I feel that as a whole the district is in good shape and functioning well.

Respectfully submitted,
L. J. Hughes, M. D.,
Councilor First District.

REPORT OF COUNCILOR OF THE SECOND DISTRICT

To The Members of The House of Delegates:

The six county medical societies of the Second District have had another successful and satisfactory year. There have been no serious problems and the groups are all well organized and functioning efficiently. Most of the counties have availed themselves of the programs provided by the Educational Committee and have been very appreciative of this service.

The District Post-Graduate Conference was held in LaSalle and was well attended and well received and it is hoped that it will be possible to continue this feature next year.

The County Committees on Medical Preparedness have been appointed and are functioning. These committees have had considerable difficulty in their effort to appraise which physcians are to be regarded as "essential" at home but it is noted with satisfaction that there is a growing realization that "the" essential is that *we win this war.*

Respectfully submitted,
EDGAR C. COOK, M. D.,
Councilor Second District.

REPORTS OF COUNCILORS OF THE THIRD DISTRICT

To The Members of The House of Delegates:

Membership in the Chicago Medical Society as of April 1, 1942, consisted of 4749 members including Emeritus and Life members plus 73 Interne members. This represents a net gain of 34 members over the same date last year and while this is not a large gain, it again demonstrates that the Chicago Medical Society continues to steadily gain in membership even though it naturally loses some of its valuable members because of deaths and removals to other parts of the country.

Probably more than 250 members of the Chicago Medical Society were on active duty with the armed forces of the United States on May 1st including the President-Elect and several Councilors and it is anticipated that this number will become much greater in the near future with the continued mobilization of troops and the call to active duty of men composing organized units enrolled for service.

In Chicago as elsewhere throughout the State of Illinois are about 500 members of this Society who are ineligible for commissions in the Medical Corps of the Army, Navy, or Public Health Service because of their having graduated from an unapproved medical school. The Constitution of the Illinois State Medical Society, adopted in 1915, as amended in 1941 provides in Article IV, Section II that "the members of this Society must hold the degree of Doctor of Medicine or its equivalent, be members in good standing of the component Society, and citizens of the United States, and be licensed to practice Medicine in Illinois." Inasmuch as the Illinois State Medical Society must accept as members, the physicians taken into the component societies, who meet the minimum requirements previously mentioned, a strange inconsistency exists whereby some of the members of this Society are constrained from offering their much needed services in a professional capacity, because of having graduated from an unapproved school. It would seem that these men should be eligible for commissions in their professional capacities or ineligible for membership in the component societies of the Illinois State Medical Society.

The office of the Chicago Medical Society with its very capable personnel has had a considerable amount of work to do in connection with the Procurement and Assignment Service and has been quick to cooperate with a wholehearted effort in this activity. Regular meetings of the Council of the Chicago Medical Society as well as scientific meetings of the Central Society have been held with a consistently good attendance. The various branch societies constituting the Chicago Medical Society have held regular monthly scientific meetings, many of which in recent months have been concerned with military medicine and surgery. To state that interest continues unabated is confirmed by the fact that as many as 200 or 300 medical men attend these branch meetings regularly.

The Chicago metropolitan area has been recently divided into 6 geographical zones for the preliminary physical examination of men called under the Selective Service Act and as many as 600 men have been given this superficial examination in one morning by members of this Society in one zone. The medical men in this area have evidenced their wholehearted cooperation in this regard.

The percentage of hospital occupancy in Cook County for 1941 was probably more than 80 per cent for general hospitals and in government, state and county institutions between 90 and 100 per cent. The advent of hospital insurance and the increase in the number of persons having hospitalization insurance has undoubtedly had to do with the continued increased general hospital census in this area. The cash indemnity hospital insurance issued to members of the Chicago Medical Society was discontinued during the past year and a suitable alternate plan has not yet been proposed or adopted. About 1800 members availed themselves of this plan during the first year and about 1600 during the second year of its existence.

The members of the Chicago Medical Society realizing that with the induction of some of its members into military service will come increased responsibilities and duties stand ready to assume added tasks, to fulfill every honorable tradition of the medical profession, and to cooperate loyally in the preservation of this democratic way of life.

Respectfully submitted,
JOHN S. NAGEL, M. D.,
L. E. DAY, M. D.,
PERCY E. HOPKINS, M. D.,
Councilors Third District.

REPORT OF COUNCILOR OF THE FOURTH DISTRICT

To The Members of The House of Delegates:

The Councilor of the Fourth District has attended all of the regular meetings but one, which was missed on account of sickness. He has addressed several public meetings, at the request of the Committee on Lay Education, and has attended monthly meetings of the State Committee on Public Welfare.

It is felt that medical affairs in this district are in a reasonably satisfactory state. Post-graduate conferences have been held in Galesburg and Moline. They have been well attended, and excellent programs have been given. Members who have attended these conferences are unanimous in the opinion that they render good service and should be continued.

At the present time, the Committees on Medical Preparedness and the County Medical Advisory Committees are just beginning to function, and it is felt that they will be increasing service as time goes on and their experience increases. Under the able leadership of our President, Dr. Phifer, your Councilor feels that these committees, with the backing of numerous county

societies, have been able to place the medical profession in a position where it can assume its rightful place of leadership in health matters. The County Representatives of the Department of Public Welfare are beginning to realize the value of local medical leadership in their department, and now appears to be the time for the profession to take advantage of this opportunity. If it does not take this advantage, the opportunity may not occur again. In this district it is felt that the local county committees are functioning very well. They had increased responsibilities, and added calls are being made on their time. It is also true that this load will get heavier as time goes on. Their work is most important, and members should be commended for the time and effort they have given, but they should also be asked to continue in this important work. The war has begun to make inroads into the population of our communities by drafting young men into military service, by taking workers out of communities to be used in other places, and by closing garages and filling stations.

In this district only a few doctors have entered the military service to date, but now that the Procurement and Assignment Service has its questionnaires out, a great number who have been waiting for this questionnaire will be entering the service. It is to be expected that by the end of this year our medical population in the state will be decidedly diminished. It is to be hoped that with the aid of the local committees on medical preparedness, no community will be compelled to do without necessary medical care. When this depletion of the medical population does occur, another possibility arises that the older and more infirm members of the profession, who are staying at home, may be compelled to work beyond their limits; and, as a result, there may be a still further shortage by way of the coronary route. The administration has recognized the need of not immobilizing its medical men as shown by action of the board controlling the tire situation, in giving doctors priority in this important item of transportation. Perhaps, as a result of this, doctors will still continue their attendance at medical meetings.

Throughout the Fourth District the doctors have uniformly rendered excellent service in selective service examinations. The increased demand for men in the army will add to this burden, but throughout the district this work is being done gladly, as a patriotic duty. With all these dislocations of our accustomed schedules and increased demands for extra effort, the profession, as a whole, is cooperating to its fullest extent and can be depended upon to make every possible effort to do its share and more, in bringing the present war to an early and successful termination. It is interesting to note that since the army regulations are being made to correspond more nearly to those of industry, the high percentage of rejections has dropped to a more reasonable level, and those who are anxious to introduce a socialized medicine can no longer point to a fifty percent rejection rate in our young men on account of physical disability.

Respectfully submitted,
E. P. COLEMAN, M. D.
Councilor of the Fourth District.

REPORT OF COUNCILOR OF THE FIFTH DISTRICT

To The Members of The House of Delegates:

At the present time the thing which most interests American citizens is the defense program. Everywhere attention has been called to the necessity of service and sacrifice by all in order to win the war. It is gratifying to know that so many members of the medical profession are willing to serve their country in the hour of need. A good many of the physicians in the Fifth District especially the younger men are entering the military service of the U. S. A. Throughout the District a number of members are serving as examiners of the draftees and all of these men are doing this work in order to help the country in this time of peril. No other group is voluntarily giving as much time and service to help win the war as the medical profession.

Aside from the war, conditions effecting the medical profession of the Fifth District have changed very little during the past year. The various county societies have held regular meetings and the attendance has been good. The tendency in the District has been to provide outside speakers for the local programs. While this method has some advantages, there also are some disadvantages. The local men, especially the younger members of the profession should have opportunity to appear upon the programs and they should be encouraged to prepare and present papers dealing with professional activities.

The membership has remained about the same. There have been some additions to the roll of members and a number of deaths have occurred. Sangamon County lost one of its most prominent members in the death of Dr. John R. Neal. For many years he had been very active in organized medicine and his work as a member of the Legislative Committee will be long remembered. McLean County lost one of its loyal members in the death of Dr. J. H. Fenelon. He was a former president of the county society and was a member of the Fifty Year Club at the time of his death.

In October the Post-Graduate Conference was held in Lincoln. An attractive program was provided and the attendance was good. Since the profession is interested in this type of meeting it would seem advisable that these conferences be continued. These programs appeal particularly to the men in general practice. Their presence at these meetings is evidence of their interest in this method of post-graduate instruction.

Some very favorable comments have been received relative to the change in style and the new features of the Illinois Medical Journal.

Respectfully submitted,
RALPH P. PEAIRS, M. D.
Councilor Fifth District.

REPORT OF COUNCILOR OF THE SIXTH DICTRICT

To The Members of The House of Delegates:

The Councilor of the Sixth District begs to report that each County Society in the District except Jersey was visited during the year, inconvenient dates prevented attending the Jersey meeting.

Conditions throughout the District were found very satisfactory, except a large number of our young doctors are being called into the services of the country. There is no great shortage yet, but if the war continues much longer, there is going to be a serious shortage in some of the smaller communities. However, since the advent of good roads and the automobile, this is going to be overcome to a large degree, with some slight delay, and with public cooperation this condition will be overcome.

The District Meeting held in Alton was an outstanding success. Attendance was good and an excellent program. Another very successful meeting, and one which is always interesting and well attended is the Annual Meeting of the Madison County Society also held at Alton.

The next District Meeting is to be held at Quincy, a fine program is promised and we hope the attendance will be above par—other interesting meetings were held at Quincy, Jacksonville, Macoupin County.

Because of the increasing shortage of doctors by induction into the service, and in some communities the increased amount of work thrown on those left at home the burden has become serious. However, the doctors are not complaining, as business is better, and our collections improving over the general trend of conditions as they existed prior to the declaration of war. Therefore, we are all happier and again able to pay our bills.

Thanks again to the officers of all County Societies for the courteous way I have been treated by all. See you in Springfield.

Respectfully submitted,
THOS. B. KNOX, M. D.
Councilor Sixth District.

REPORT OF COUNCILOR OF THE SEVENTH DISTRICT

To The Members of The House of Delegates:

The usual stereotype report which has been characterized by the statement that all component societies are well organized; no dissention or dissatisfaction found; peace and harmony prevails throughout, would at this time be stating only half truths and probably bring about wide repercussions.

All the Societies, however, in the 7th District are organized and functioning, but there has been a decided change socially and economically and the old spirit "business as usual" fails to express the real condition. A critical study and summary of the past year's activity reveals—that demands have been and are still being made upon the time of many physicians for conducting physical examinations of draftees, committee meetings on Advisory Boards and Civilian Defense organizations. This service as usual has been rendered in the same altruistic spirit that has always characterized the medical profession, and in most cases without thought of remuneration. As in all the other Districts, many of the older men are being forced to assume added responsibility occasioned by the induction of the younger men into the armed forces and not a few who are beyond the draft age are offering their services for the duration.

The Committees on Medical Preparedness have been given a large assignment and it is the feeling of most of the members of the committees that we have a war to win that very few physicians of draft age should be declared as essential but most of them should secure, through the proper channels, commissions in the armed forces of the Government.

A deep feeling of resentment is manifested throughout the District against the deferment of graduates from sub-standard schools; of the refugees, of which Illinois has a large percent, and of the cults. Improvement of the above named conditions should be a concern of the House of Delegates.

A storm of protest has occurred in certain sections of the District over the plan for providing medical care for Public Assistance Recipients, and undeserved criticism has been directed against the officers of the societies and members of the Council. The plan as mailed to the physicians, while not properly worded, received the endorsement of the representatives present at the District meeting last November at which time Dr. Charles H. Phifer addressed the group. This verbal attack is most unfortunate since the plan is the best possible under existing laws and legal handicaps.

The Post Graduate Conference which was held in the District last November was well attended and met with much favorable comment.

During the past year some of our most active leaders in the profession, both in the District and out, have had their rendezvous with death. Their advice and council, courage and loyalty to the cause of organized medicine will long be cherished and remembered.

Respectfully submitted,
I. H. NEECE, M. D.,
Councilor Seventh District.

REPORT OF COUNCILOR OF THE EIGHTH DISTRICT

To The Members of The House of Delegates:

One year ago we were supposed to be at peace but were engaged in the procurement of an army for the defense of our country, through the Selective Service plan and medical men were busy meeting the added responsibilities placed on them.

This year the picture has entirely changed. WE ARE AT WAR against "Aggressor Nations," who seek to destroy our freedom and our Democratic way of life. The dastardly attack on "Pearl Harbor," December 7, 1941 by the treacherous "Japs" made us an united nation, determined to defend our country and in the end defeat those nations, who have ambitions to rule the world. Medical men are responding to the best of their ability and service to help prosecute this war to a successful end.

Since we entered this war on December 8, 1941, our whole social structure of life has made many changes: business—big and small—of our country have undergone drastic changes; and the medical profession has been confronted with many new problems. It has been said that a "Democracy at War ceases to be a Democracy;" so it is to be expected that changes will occur and new problems will arise. At present our most important task is to win this war but it is also important that we keep in mind conditions that will follow after the successful termination of this war. No doubt the majority of us are concerned about just what form of government we shall have; business is definitely concerned in the future of industry; and it is equally important that organized medicine should think of the future of medicine.

When the House of Delegates, at the annual meeting of the American Medical Association, held at New York in June 1940, passed the resolution for regimentation of the medical profession for National Defense, it was explicitly stated that it was only for the duration of an emergency. This was a wise provision because regimentation is not the democratic way of life. Another provision was that this regimentation must be developed through the channels of organized medicine, from which came the Procurement and Assignment Committee. This committee has had the co-operation of the Surgeon General and medical men should have a feeling of satisfaction that the medical defense of the country is in the hands of medical men. There was also a warning to the medical profession that, at times of an emergency and regimentation, there was a tendency toward a let-down in medical defense of the country is in the hands of medical ly during the past year and medical societies have been encouraged to keep up with their scientific programs.

The application of the Social Security Act, and especially that part that has to do with the plan, for providing medical care to public assistance recipients, has brought out much unfavorable comment by medical men in the Eighth District. Many doctors object to the authority given the Welfare Workers in this medical problem and decidedly resent the suggested fee schedule. This question should receive much thought and serious consideration by the House of Delegates of the Illinois State Medical Society.

The component medical societies of the Eighth District have kept up their usual activities during the past year. The scientific programs have been continued with a high standard and well supported by the membership. Medical men are meeting their responsibilities in the many new problems presented and naturally are working longer hours. They seem to be keeping abreast with the times. In the early part of May, a meeting will be held in Danville and "The Doctor's Responsibility in National and Civilian Defense" will be discussed. All doctors in the Eighth District and some adjoining counties will be invited. I feel quite certain that the doctors in the Eighth District can be depended on to do their part in the Medical Defense of the country, both National and Civilian.

Respectfully submitted,

C. E. WILKINSON, M. D.,
Councilor Eighth District.

REPORT OF COUNCILOR OF THE NINTH DISTRICT

To The Members of The House of Delegates:

The Ninth Councilor District is composed of fourteen counties in the southeastern part of the state. Some of these counties have a goodly number of physicians, and some have but few. There are 12 organized Societies in the Ninth District one small county has no organization and one small county, Hamilton, is combined with Jefferson in an organization. The Jefferson-Hamilton County Society, the Wayne County Society, Franklin, Williamson, and Saline County Societies have regular monthly meetings and splendid scientific programs. Three counties, Johnson, Pope and Massac, have a tri-county organization and have monthly meetings. Some of the small counties, Edwards, Wabash, White and Gallatin have meetings occasionally. However, many of the physicians in these counties attend the scientific programs held in other parts of the district.

For some reason the attendance at medical meetings in the district have not been as good as in former years; notwithstanding the scientific programs have been excellent and have been well advertised. This is probably due to the fact that many physicians have been called into the service, the birthrate has materially increased and various industrial plants have been working at top speed which has resulted in more casualties than usual.

Quite a number of physicans from the Ninth District have entered the Medical Corps of the Army, Navy and Air Corps during the past year and others are awaiting a call. However, no one in this territory has suffered from lack of care. Doctors remaining at

home have cut out their fishing, hunting, vacations and have started working earlier and have worked later to see that no one suffered from lack of medical attention.

In almost every county in the Ninth District there occur from time to time advertisements in local papers of itinerant, unethical physicians who have been licensed to practice medicine in the State of Illinois. They usually stop at some hotel for one day, examine free and claim they can successfully cure without surgery all diseases to which the human flesh is heir. It is hoped that some legislative measures can be enacted that will subject these "advertising quacks" to prosecution or revocation of their license.

There are a number of physicians located in the Ninth District who are graduates from a medical school in Chicago which is not approved by the A. M. A., and who are not accepted for licensure in many other states in the Union. It is quite embarrassing for some of these physicians at the present time, who are within the draft age, to find that the school from which they have graduated prohibits their being commissioned in the Reserve Corps, Army, Navy or United States Public Health Service. It is my opinion that this humiliating situation should be called to the attention of the faculty of that school, and they should be urged to either make it a class-A school or close its doors.

Respectfully submitted,

ANDY HALL, M. D.,
Councilor, Ninth District.

REPORT OF COUNCILOR OF THE TENTH DISTRICT

To The Members of The House of Delegates:

There has been considerable activity throughout the Tenth Councilor District during the past year due to the fact of the war situation. The doctors of our district must be commended for the excellent work they have been doing in Selective Service. Approximately twenty physicians have been called to service.

Civilian and Medical defense programs have been established in every county; also a plan for physicians' services to the Recipients of Public Assistance under the direction of the Department of Public Welfare. It is quite evident from the criticisms that have been received throughout the district that in setting up this program there should have been closer co-operation between the director of the County Welfare Program and the physicians and an explanation made of the modus operandi.

There has been considerable criticism regarding the fee for major work such as fractures in the aged and some type of operations on children, which necessitate long after-care. Also, there has been no provision made for anesthesia or assistant fees. I recommend, upon the advice of the members of my district, that legislative proceedings be started whereby the doctor can be reimbursed for his services from the Department of Public Welfare rather than by the recipient, although I understand this cannot be done under present laws. They are convinced that this would save the State and Federal Governments a lot of money and the doctors would have some assurance of being paid. They also recommend that policies be set up in the Department whereby the physician will be compensated for his services in the event of the death of the patient. Most of them feel that this was an oversight on the part of the committee from the Medical Society who aided in writing the program. This point was brought out by a representative from the Department of Public Welfare at a joint conference of five Southern Illinois counties under the auspices of the Jackson County Medical Society.

Remembering back not so many years ago when a suggestion of co-operation of public service with the Department of Public Health would start a fight in most all of our County Medical Societies, I feel very highly elated over the report that I have the privilege of making at this time. The answer to the question: "What was the principal activity of your County Society last year" was the co-operation of the local Medical Society with the Department of Public Health in programs of immunization and inoculations. In some of the counties the percentage of this work with the school children runs very, very high, in others not so good. In meetings where this was brought up for discussion, the response to the questions on this subject assured me that the doctors were sincere in this work and were proud of the job they were doing.

There were two Post-Graduate Conferences held in the district during the past year, one in Carbondale and the other a joint conference of Missouri and Illinois held in Belleville.

The Southern Illinois Medical Society, which is sponsored by the physicians of the Ninth and Tenth Districts was held this year at Murphysboro. These, along with the number of scientific programs given in the individual County Societies, speak well from an educational standpoint that the men of the district are still interested and active in the advancement of medical science.

During the past Holiday Season, I forwarded a personal note to every member of my district with some recommendations for activities for their Society, also calling to their attention the benefits they derived from the Illinois State Medical Society. I received a great number of responses, which proved that the effort was appreciated.

Respectfully submitted,

G. C. OTRICH, M. D.,
Councilor Tenth District.

REPORT OF COUNCILOR OF THE ELEVENTH DISTRICT

To The Members of The House of Delegates:

Interest of the component county societies of the Eleventh District, has in medical affairs both local and

state been at its highest point the past year. The percentage of total possible membership remains so high, that today it is difficult to find many eligible men outside the membership. Of course, this is, as it should be and represents an index of the work of the officers and active members of each society as well as an ever increasing realization by the rank and file of the importance of organization, especially in these troubled times when new problems are arising all too frequently.

Will-Grundy continues to have the largest membership in the District and its weekly meetings, addressed by outstanding men from both Chicago and downstate, gives the membership a practical post-graduate course each year. They have gradually solved the problem of dues which was their chief worry back in the early thirties, when they were caught in the bank debacle. The activities in the new Defense Plants located near Joliet have resulted in increased business in the medical field as well as all others in the Joliet area.

DuPage County continues to have a most enthusiastic organization with a high percentage of membership. Monthly meetings are held at different points in the county and usually they are addressed by outstanding men from the Chicago area. Unfortunately the Councilor has not visited the DuPage County Society this year, but he feels that the fact that he has not been called upon is good evidence that all is under control there.

Kankakee County Society is in a healthy condition. Its membership continues high in spite of the loss of many men to military service from the two State Institutions located within its boundaries. They hold monthly meetings, which are well attended. We regret to announce the death of Dr. G. H. Ayling of Kankakee last August. Dr. Ayling was the Delegate from Kankakee County and was well and favorably known both in his home county and throughout the state. His loss will be felt for many years.

Iroquois County Society continues to function well with meetings eight times a year. The Councilor attended a meeting last June when Dr. Henry Bossart of Buckley received his membership in the 50 Year Club. There was a large attendance at the meeting.

Ford County with its small potential membership, mostly in small communities continues to function very well even though they do not have meetings as frequently or regularly as some of the other societies in the District.

There has been no special problem in any of the component societies of this District. Most of the work of the Councilor has been routine and he has enjoyed visiting the different societies during the past year and renewing old friendships and helping to keep the work going. The ever increasing number of Doctors going into the military service has caused great concern among the entire profession. Fortunately, no community in the district has been left without adequate local available servic, but with more men going into the service monthly, we feel there will be an increased responsibility on those who remain at home to see that the civilian population receive adequate medical care during the time when the rest of the medical profession are gone.

Below is the detailed report of the component county societies of the district, as reported by the secretary of the society:

County	DuPage	Ford	Iroquois	Kkk.	Gr'dy Will
Membership 1941	71	13	26	61	98
Membership 1942	67	12	27	66	106
Deaths in 1941	0	0	0	1	1
New members 1941	3	1	1	6	2
Meetings in 1941	10	1	8	10	31
Members in service	2	1	2	3	7

The recently presented plan for the care of old age pensioners and dependent children has created great unrest and discussion in most of the component societies in this district. This is partially the result of the way in which the plan was presented to the profession of the state, as well as a failure on the part of the membership to follow carefully the history of the work preceding this plan and forgetting the fact that a preliminary report on the plan was presented to the Secretaries Conference at the 1941 meeting of the Illinois State Medical Society. Much can be said on both sides of the question of advisability of accepting the plan as offered. It is to be hoped that every delegate to the annual meeting will have talked over the plan with his local society after having thoroughly investigated the work so far done by the committee appointed in 1940 in their attempts to obtain the best possible plan for the care of these unfortunates. The House of Delegates is the place to settle this controversial question. But it seems unfair to question the sincerity and honesty of the Committee before they have been given the opportunity of explaining the nature of the problem as well as the reasons for their approval of the proposed plan.

The Councilor wishes to thank the members of the Component Societies for their cooperation the past year. Particularly he wishes to thank the County Secretaries, who after all are the spark-plugs of the organizations.

Respectfully submitted,
E. S. HAMILTON, M. D.,
Councilor Eleventh District.

REPORTS OF COUNCILORS-AT-LARGE

To The Members of The House of Delegates:

Councilors-at-Large having no definite duties to perform are not overworked. I have attended meetings of the Council, some of the Post-Graduate meetings made a number of addresses and answered when called upon for any service. It has been a pleasure to serve our Society even as a doorkeeper and I pledge my best efforts at all times when needed.

Respectfully submitted,
J. S. TEMPLETON, M. D.,
Councilor-at-Large.

To The Members of The House of Delegates:

After enjoying himself for two years as President-Elect and President, a man is allowed three years as Councilor-at-Large to come gradually to the realization that it was the office and not the man that was important. During his term as Councilor-at-Large a man serves the Society in various capacities: He has a voice in Council debates: He serves on various committees and pinch hits for county societies whose speakers have disappointed them. It has given me real pleasure to serve a few times in that capacity. A man who has been honored by the presidency should ever after be ready to serve either the state or county societies in any way that he can. Having trained a man for that position, it seems to me the Society might well require of him five years service as Councilor-at-Large instead of three. In this emergency all of us are serving on various committees to help in the war work. Those of us too old to serve in the armed forces must be ready to help in every posible way to speed the war effort and to help our younger conferees who are called upon to wear the uniform.

It has been my pleasure to assist Dr. Camp in revamping the Journal; to help Dr. Phifer and his committee to put into effect medical service for the people on old age assistance and the aid to dependent children program. The Civilian Defense program both in the Chicago Metropolitan Area and downstate has taken some time. As a member of the Board of Public Health Advisers, I have offered Dr. Cross such help as I could in looking after health measures in the defense areas, about the various munition and ordnance works. Dr. Cross is highly cooperative with the medical society and deserves our thanks and commendation.

As always it has been a pleasure to work with the members of this great Society.

Respectfully submitted,
JAMES H. HUTTON, M. D.,
Councilor-at-Large.

To The Members of The House of Delegates:

My years as a member of the Council of the Illinois State Medical Society will terminate with this 102nd Annual Session. To journey back through memory's lane the past almost two decades would indeed be interesting. Only about two members of the Council still remain who were members at that time. The work and responsibilities of the Council and its officers have multiplied many times. The activities and functions of the County Medical Societies are more definitely performing the purpose for which they were originally intended and, as has been repeatedly said, the most important fundamentally of all medical organizations.

It is scarcely realized by the membership of the County and State Societies the many problems that arise in medicine that are only solved for the best interests of our patients and the progress of medicine after long discussion and deliberation by the Council.

It cannot always be said that the best interests financially lie along the path of one who devotes his time and talents in responsibilities of ever carrying the torch of medicine forward to greater achievements for the relief and treatment of human ailments. Our efforts in helping build a better structure for medicine in its purpose of producing better physicians and solving the question of the prevention and cure of disease is certainly adequate compensation for our efforts and sacrifices.

The members of our profession, as I stated a year ago, tendered their services free to the Federal Government, and have shared the responsibility of getting ready and preparing an army for national defense. Now since the declaration of war by Congress, the great effort of preparing our people as a nation to meet this emergency, not only examining each one at to personal fitness for service, but in every effort to keep our nation healthy and our armed forces fit to fight, this multiple responsibility of caring for health of our civilian population is indeed a Herculean task. But the history of the medical profession during the wars of our country does not disclose that it has in any way failed to perform its duty upon the field of valor since the days of Joseph Warren at Bunker Hill.

We have had the responsibility of "all out war" now for the past four months. The serious side of war is beginning to be appreciated by the departure of our friends and neighbors to camps and even to battle fronts on foreign fields.

The local civilian defense is well organized and being prepared for its regular functions of national defense in the control of epidemics as well as for the misfortune of any air attacks.

The task of performing all the multiplicity of duties that our profession is being called upon to assume seems almost insurmountable. May we ever measure up to these duties and continue, as heretofore, to practice and exemplify the true spirit of American medicine. With this spirit we feel that victory will crown our efforts.

Respectfully submitted,
SAMUEL E. MUNSON, M. D.
Councilor-at-Large.

REPORT OF PUBLIC RELATIONS COMMITTEE

To The Members of The House of Delegates:

The Committee on Public Relations has had a quiet year since the last annual report was presented at the 1938 meeting. The principal duties of the Committee have been pertaining to the adjustment of legitimate claims against insurance companies for the care of injured employees. Since the Committee was formed for this purpose, we have contacted a number of Accident Insurance Companies and our relations have been quite harmonious.

Physicians generally, have been soft marks for these companies. Needing money badly and being unwilling to fight for their rights they have agreed to

this and settled on that basis. This has been so general that many of the companies have insisted over months, and the physician is finally worn out and agrees to settle.

The Courts have ruled in this State that when physicians render bills for care to injured employees, the bill, if in conformity to the fee schedule of that particular community, is a just bill and must be paid.

During recent years we have attempted to show various Insurance Companies that standard fee schedules for the community must prevail in these cases and have succeeded in getting many bills paid in full.

When any member of the Illinois State Medical Society has trouble in getting payment in full for services rendered to Companies carrying insurance, and his fees were in accordance with the fee schedule of the community, our Committee will gladly do everything possible in assisting the member to get the settlement to which he is entitled.

An itemized account of the charges made in each case, with a statement from the County Medical Society secretary that the bill is just and conforms to the usual rates for that type of service within the county, should be sent to the Chairman of this Committee, and we will render all possible assistance.

If the House of Delegates desires additional information regarding any of our activities, we will gladly submit same. If it is desirable to give additional duties to this Committee, we will be most happy to enlarge our services to members.

Respectfullysubmitted,
W. S. BOUGHER, M. D.,
Chairman,
FRED H. MULLER, M. D.,
H. W. WOODRUFF, M. D.,
Public Relations Committee.

REPORT OF LEGISLATIVE COMMITTEE

To The Members of The House of Delegates:

Since the September, 1941 issue of the Illinois Medical Journal carried a complete and detailed report of the activities of the Regular Session of the Sixty-Second General Assembly, this report is intended simply to supplement the earlier one, and complete the medical-legislative picture to date.

On December 18, 1941, in response to the Governor's call, the First Special Session of the Sixty-second General Assembly convened in Springfield. On that day, Illinois enjoyed the distinction of being the first state in the Union after Pearl Harbor, to summon its legislature to consider matters of local, state and national defense. At that time, leaders of both parties announced that the common danger had achieved complete unity of purpose between the parties, and that all political differences would be shelved for the duration. The hollowness of those assurances soon became evident, and the legislature settled down to a six weeks session at which very little of importance was accomplished.

The Illinois Constitution provides that a Special Session may transact only such business as comes within the scope of the Governor's call. It further provides that an enactment by the legislature shall not become effective until the July 1 following approval by the Governor, unless the bill contains an "emergency clause." In order to pass, a bill containing such a clause must receive a two-thirds majority in the House and in the Senate. This proved the undoing of most of the Administration-sponsored legislation, since the balance of political power is very delicate in each house, and on a straight party split, the Administration was unable to muster the two-thirds majority necessary to pass its measures.

Because the session was called for the purpose of considering defense legislation, relatively few matters affecting public health or the practice of medicine were involved. The Department of Public Welfare was unsuccessful in its attempt to get authority to cope with the anticipated shortage of physicians, nurses and technicians in state institutions, by employing the best qualified people available to take the places of doctors, etc., called into service. In the field of Public Health, the Director was authorized to define "public health zones" within the state, for defense purposes, thus rendering less difficult the protection of the health and safety of the people in areas engaged in defense work. Another measure affecting the medical profession is the bill which was passed, prohibiting the possession of disease producing viruses or cultures by persons intending to use the same to impair the health of men or animals. The bill is so drawn, and has been so construed, that animal experimentation is in no way affected thereby.

As of the date of this report, it is generally believed that a Second Special Session will be called for the middle of May. Your Legislative Committee does not anticipate, however, that the Governor's call will be broad enough to permit the introduction of much of the objectionable cult legislation which is ever present at the regular sessions.

This Committee urgently solicits the energetic support of every member of the medical profession in the State of Illinois. It is well known to certain selfish groups, that times of emergency are most opportune for the furtherance of their particular aims. They know also that many, many physicians are being called to active duty with the armed forces, and that the ability of organized medicine to furnish effective and intelligent resistance to low grade legislation is not improved thereby. It is therefore imperative that each and every physician in this State cooperate with this committee when called upon to do so. Otherwise, the entire system of regulation of the treatment of human ailments in Illinois may be seriously endangered.

Respectfully submitted,
R. H. HAYES, M. D.,
Chairman,
MATHER PFEIFFENBERGER, M. D.,
HARRY OTTEN, M. D.,
Legislative Committee.

Dr. Robert H. Hayes: I would like to make a brief supplementary report. The death of Dr. Neal was a great loss for which we were not prepared. During the year there has been very little medical legislative material that needed consideration. We have engaged a man in Springfield to do the legislative work for the Committee. I would like to have you meet the son of Dr. Neal, Attorney Jack Neal of Springfield, who will act as liaison officer for the Committee.

John W. Neal, Jr.: Supplementing the report that appeared in the Handbook, I can only say that the immediate prospects in the legislative field are that there will be no special session of the Illinois Legislature until some time in August. The political parties seem to have considerable difficulty in getting together on certain things. As the feeling goes, the cults have been gaining more power each succeeding year. We are combating their legislation but they are becoming more powerful. Every year there are more bills. I simply want to ask every member of the House of Delegates and every member of the County Medical Societies to cooperate as closely as possible with your Legislative Committee, because they need your help more and more all the time. My Dad was very well acquainted with every member of the Legislature and had many personal friends in both parties. That particular contact is going to be difficult to replace. The best substitute will be close contact between the doctors in each senatorial district and their particular representatives. You are not called upon to do anything unless it is felt to be urgent by the Legislative Committee. If you are called upon to contact your senators or representatives, believe me that your assistance is very vital, and the fact that so many doctors have gone into the armed forces will make our work increasingly difficult. I ask your close cooperation.

Dr. Hayes: I would ask that when Mr. Neal or the Chairman of the Committee calls upon you, you respond promptly.

REPORT OF MEDICO LEGAL COMMITTEE

To The Members of The House of Delegates:

There have been sixty-nine calls and inquiries come before the Committee in reference to malpractice suits and Medico-Legal matters. These have been attended to by the Committee. There were fourteen suits started against doctors.

The number of suits have been less in number the last two or three years, but the suits started have been more serious.

There are six suits still pending in which the Society is financially responsible for the defense, because they were the suits pending before June 20, 1937 at the time the Society was advised to stop the defense of malpractice suits.

Our able attorneys, Mr. E. W. Rawlins and Mr. James F. Wright, have successfully defended one suit in which the Society was responsible, since May 1, 1941. The case of William Holden vs. Samuel Stein, et al. was appealed by the plaintiff to the Appellate Court of Illinois on December 22, 1941. The Appellate Court rendered its opinion whereby it affirmed the action of the trial judge in directing a verdict at the close of the plaintiff's case, finding the defendant, not guilty. The suit involved treatment rendered in connection with a fractured leg.

Respectfully submitted,
J. R. BALLINGER, M. D.,
Chairman.
T. B. WILLIAMSON, M. D.,
Secretary.
OSCAR HAWKINSON, M. D.,
C. U. COLLINS, M. D.,
A. H. GEIGER, M. D.,
R. O. HAWTHORNE, M. D.,
Medico-Legal Committee.

Dr. J. R. Ballinger: There have been two matters that I think are worthy to be brought to the House and that happened since the report was printed. First, I would like to call the attention of members of the House to the article in the Journal of the A. M. A. for September 19, 1941 in which it states that doctors may be sued for civil action for malpractice unless the suit contained something in reference to national defense. There is no provision in the U. S. Army to defend these cases but the Judge-Advocate of the Army has appointed attorneys to defend these doctors if they are sued for malpractice. The only recourse would be to have a bill passed by Congress in order to remunerate them for damage.

Another matter that is important. Dr. Weld, the President-Elect of the State Society wrote a letter some time during the past year calling attention to the fact that an insurance company that I may mention later had raised the rates of their policies one dollar a year. This matter was gone into at the first meeting of the Council

this year. Investigation was made to find out the cause and why it seemed justified to raise the rate. All kinds of answers were received. One of the best answers was that they thought the price of everything else had gone up, which was not entirely satisfactory. The next reason was that they had fewer cases of malpractice but they were more severe and involved and more trouble for the defense. This was true in two cases that we knew about, and in looking over our record we found out they were serious cases. We keep working as best we can. The 10th of April I received a letter from the insurance company saying they had reduced their rates one dollar per year, back to the original rate of $17.00 a year for $2500-$7500. The Medico-Legal Committee worked for some years to get this low rate and we believe this low rate will cover about 90 per cent of the doctors in Illinois. It probably will not cover the men doing surgery and x-ray but it will cover about 90 per cent of all malpractice suits in Illinois.

REPORT OF MEDICAL EDUCATION AND HOSPITALS COMMITTEE

To The Members of the House of Delegates:

Two events of major importance have occurred in the field of medical education in Illinois during the past year. The first of these is the new and unprecedented demands now being made upon the medical schools of Illinois and throughout the country because of the War. There will be no material increase in the size of the classes. But many schools have adopted an accelerated schedule whereby a new freshman class will be admitted every nine months, instead of, as heretofore, every twelve months. There will be no summer vacations. In this way each school which has adopted this schedule will graduate four clases during the next three years, instead of the usual three.

There has been no lowering of standards of education. The requirements for graduation have not been reduced. A few courses—such at Military Medicine, Chemical Warfare and Tropical Medicine—have been added to the regular curriculum. Faculties have been reduced by the entry into the Army or Navy of many teachers, but those who remain will do more wrok and thus teaching will not be diminished.

It is now possible for students who have been accepted for entrance and those of all four classes already enrolled in Class A medical schools in Illinois and throughout the country, to be appointed in the United States Naval Reserve with the commission Ensign H-V (P), provided they meet the physical and other requirements for such appointment. Students of the same groups may also be commissioned as Second Lieutenants, Medical Administrative Corps, Army of the United States, providing they meet the physical and other requirements for such appointment. "Students who hold commissions come under the jurisdiction of the Army and Navy authorities and are not subject to induction under the Selective Service Acts. The Army and Navy will defer calling these officers to active duty until they have completed their medical education."

Research in the laboratories of medical schools will be reduced, partly because of reduction in personnel. Much of the research that will be carried on will be on problems assigned by the Government and will be concerned with defense.

The second event referred to above is the passing of Rush Medical College. This great school which, during the almost one hundred years of its existence gave to this country many distinguished physicians, has ceased to have a separate existence. It has been merged with the University of Illinois School of Medicine where its only identity will be in certain "Rush Professorships."

The Committee on Medical Education and Hospitals, with the present personnel, reported certain statistical data pertaining to hospitals in Illinois in 1936. In the five years that have intervened between that date and 1941 some changes have occurred in the number of hospitals and in the number of patients and average daily occupancy. These changes are shown in Table I.

TABLE I

STATISTICAL DATA OF HOSPITALS IN ILLINOIS

Hospitals—	1936	1941	Percent Increase or Decrease
Total	317	311	— 1.90
Government	75	77	+ 2.67
Non-Government	242	234	— 3.34
Beds—			
Total	73,828	86,018	+16.55
Government	50,506	61,817	+22.40
Patients Admitted—			
Total	609,365	779,644	+28.10
Government Hospitals	150,216	201,378	+34.00
Non-Government Hospitals	459,149	578,266	+25.90
Average Daily Occupancy—			
All Hospitals	60,573	73,145	+20.70
Government Hospitals	47,103	55,630	+18.10
Non-Government Hospitals	13,470	17,515	+30.00

SUPPLY AND UTILIZATION OF GENERAL HOSPITALS

The supply and utilization of general hospitals by the public in Illinois compared with other parts of the nation and in the continental United States, are presented in Table II.

TABLE II

	General Hospital Beds per 1,000 Population	Percent of Occupancy in General Hospitals	Percent of Population Entering General Hospitals
Illinois	3.8	74.2	9.1
Maximum—District of Columbia	10.6	78.0	15.4
Minimum—Utah	2.1	55.3	3.5
United States	4.1	68.2	8.1

It will be noted that in the District of Columbia the number of general hospital beds per 1,000 population, the percent occupancy in general hospitals and the percent of the population entering general hospitals, is far higher than in Illinois and in the United States as a whole. This may be due to the fact that the population of the District is composed chiefly of government employees without permanent homes and living chiefly in boarding houses, or it may have quite a different significance.

The difficulty of obtaining internes for hospitals approved for interneships is become more and more serious. In Table III is shown the increase in the number of vacancies in the interne staffs of the approved hospitals in Illinois and in the United States as a whole. In January, 1942, 51.3 percent of the approved hospitals in this State and 18.6 percent of those in the United States had less than their normal quota of internes. From January, 1940, to January, 1942, the number of vacancies throughout the country increased 228 percent, and in Illinois, 145 percent.

TABLE III

VACANCIES IN INTERNE STAFFS OF APPROVED HOSPITALS

			Total		U. S. A.	
	No. of Hospitals	No. of Vacancies	App'd Hospitals	Total Internes	No. of Hospitals	No. of Vacancies
Jan. '40	20	60			176	344
Jan. '41	30	79			270	615
Jan. '42	40	147	78	467	427	1128

In 1941, in the State of Illinois, there were 104 schools of nursing with 6835 student nurses. The schools of nursing are confronted with much the same problem as that which faces the medical schools in meeting the increasing demands of the armed forces for trained personnel.

The percentage of autopsies done each year in a hospital has long been recognized as a criterion of the quality of work in that hospital. The number and percentage of autopsies in hospitals in Illinois and throughout the United States are shown in Table IV.

TABLE IV

NUMBER AND PERCENTAGE OF AUTOPSIES IN HOSPITALS IN ILLINOIS AND IN THE UNITED STATES IN 1941

	No. of Deaths	No. of Autopsies	Percent
All hospitals in Illinois	37,310	9,064	24.3
All approved hos. in Illinois ..	20,098	6,798	33.8
All hospitals in U. S.	250,000	96,151	38.5

In the 78 approved hospitals in 1941, the average number of autopsies per hospital was 87.2; in the 233 hospitals not approved for interneships, the average number was 9.7.

This report is presented without recommendations for the information of the members of the House of Delegates of the Illinois State Medical Society.

Respectfully submitted,
W. R. MARSHALL, M. D.
H. O. MUNSON, M. D.
J. P. SIMONDS, M. D.,
Chairman.

REPORT OF COMMITTEE ON BENEVOLENCE FUND

To The Members of The House of Delegates:

There will be no written report from the Committee on Medical Benevolence. The members of the Committee will make a verbal report from the floor.

Respectfully submitted,
JOHN S. NAGEL, M. D.,
Chairman.
CHARLES H. HULICK, M. D.,
C. H. BOSWELL, M. D.

Dr. John S. Nagel: The Chairman of the Committee did not submit a printed report for the simple reason that there was not much that we could report. The Committee is not at liberty to reveal the names of those who receive compensation. No one knows who they are except the investigating committee and the office of Dr. Camp. Some of these people are very sensitive and some inquire whether or not their names will be published. So we try to keep it as anonymous as possible.

At the present time we are aiding about fourteen or sixteen families. That family may consist of an old doctor, a widower, or it may be the widow, or a widow with five children. It does not mean necessarily an old person. We are paying one young man, about 33 years of age, who was stricken with pulmonary tuberculosis, thirty dollars a month. It makes him very happy and he is going on his way towards rehabilitation.

There is one thing more I would like to say and it is this: We call on you to investigate these cases and we wish you would be a little more prompt and a little bit more effective. We try to keep just as much red tape away from this procedure as is possible. When we send out an application blank with certain inquiries and it comes back with a lot of check marks, that does not mean anything to the Committee. We must have some kind of a statement, and that does not mean yes or no. There is plenty of space on the back of the page where you can write down something about this individual. In one particular case there was controversy, so much that the Committee decided to wait until such a time as the matter could be ironed out. At the present time there are only one or two cases pending. While we are at this meeting the Committee will go over the cases. We have sent out statements asking

that the recipients restate their need for funds so that we can revaluate them. There is one case to be dropped because we found that the circumstances have changed and the family no longer needs our assistance. In two cases we have refused aid. There is a possibility that we may investigate these cases personally. I appreciate the fact that some of you will have to go long distances in order to contact some of the people. In one instance we wanted to pay a man's per diem expense if he would go over and investigate a case. That was about six months ago and so far I have not heard from him. So we will have to try and find some other way of getting the information.

That is all I have to report. I have received one application here this afternoon from a general practitioner down state. I think it is up to you men to investigate these cases because with Dr. Hulick in Shelbyville, Dr. Boswell in Rockford and myself in Chicago, we cannot investigate to find out whether the people need help.

We did not care to write out a report because there was nothing for us to say to you. The financial report will come from the Secretary-Treasurer.

Most of you have heard of the Adolph Gehrmann Fund of $50,000 which was left for indigent doctors. It seems that the individuals managing the fund could find no indigent doctors so they eventually turned over the fund to the Community Fund. This brochure came into my hands and in it is the statement:

"The Adolph Gehrmann Fund for sick and disabled doctors provided family assistance for $960.00. All had been highly approved medical practitioners for many years."

I have yet to find out who certified them because the Chicago Medical Society did not and neither did the Illinois State Medical Society.

The President: This Committee is doing a good piece of work and we all appreciate what they are doing.

REPORT OF EDUCATIONAL COMMITTEE
MAY 1, 1941—APRIL 30, 1942

To The Members of The House of Delegates:

One of the most widely used words today is "production." Industries are asked to produce, farmers are asked to produce, professions are asked to produce. Speed and action are important in winning this war. In keeping with this nation-wide production program, the Educational Committee of the Illinois State Medical Society has also stepped up production, the production of better understanding between the profession and the public. And how has this been done? Through grasping every opportunity that presented itself of telling the story of medicine and its achievements. Doctors of the state have been most generous in contributing their time to carry on all the important activities of the Committee. Without this cooperative spirit of the doctors, the program of the Educational Committee would be greatly curtailed.

Each year the Committee has carried on some new type of program and this last year one of the outstanding accomplishments was the use of the "Leave 'Em Where They Lie" articles in about 100 Illinois newspapers and in the Chicago Medical Bulletin. These articles, a series of twenty-five on first aid on the highway, were prepared by the Texas State Medical Society who most graciously gave the Committee permission to use them in Illinois. The material was submitted to the State Highway Division of the State of Illinois and to the Chicago Orthopedic Society before released to the newspapers. Those two groups were co-sponsors of the material. These articles were also mimeographed and furnished safety engineers and medical directors of large industrial organizations to serve as the basis for courses in first aid.

A number of newspapers carried editorials commending the Illinois State Medical Society for this most worthy contribution.

OFFICE OF THE COMMITTEE

For the first time in many years the members of the Illinois State Medical Society can be proud of the appearance of the office of the Committee. Some new furniture was purcahsed and new electrical office equipment installed which makes it possible to turn out a greater volume of work. Space was made available and is being used by the Journal, the Legislative Committee, and the Secretary when he is in Chicago. It is a very satisfactory arrangement and the public is now aware that any information it wants concerning the medical society can be obtained by calling one number instead of trying three or four before getting the right one.

The office has been used as a meeting place for various groups including the Advisory Committee on Health of the Illinois Congress of Parents and Teachers.

It would be impossible to list all of the questions and demands which come to the office of the Committee but the most frequent are those asking for information regarding the Department of Registration and Education, about hospitals, medical schools, nursing schools, where physical examinations may be

taken, information about pre-marital examinations, and inquires regarding the State Department of Public Health and the American Medical Association. The office has been happy to assist those needing information.

FIFTY YEAR CLUB

The Committee has assisted a number of county medical societies with special publicity concerning "Fifty Year Club" members. Newspapers are particularly interested in these events.

Doctor John S. Nagel obtained the Fifty Year Button from the family of the late Doctor Arthur Brumback and a brief history of his life. They were offered to the State Library in Springfield which was unable to accept on account of having no exhibit of this category. The Chicago Historical Society accepted the material as a part of its medical collection. It seems very appropriate that one of the Fifty Year Buttons of the Illinois State Medical Society should be a part of the permanent exhibit of the Chicago Historical Society.

PUBLICITY FOR ANNUAL MEETING

Newspaper clippings pertaining to the Annual Meeting of 1941 evidenced the cooperation of many publications in giving the meeting publicity, and interest on the part of the press. The press room at the Palmer House during the meeting was constantly used and reporters were present from the Chicago Tribune, News, Times, Herald and American, United Press and the Associated Press. The latter gave wide coverage to the many important features of the meeting.

2,193 pieces of literature about the annual meeting went out from the office of the Educational Committee.

One of the important radio programs during the month of May, 1941 was that given over WAAF on the Saturday noon before the Annual Meeting when Doctor J. S. Templeton spoke on "The Family Doctor." Following this broadcast a full announcement was given of the meeting. Station WGES gave information about the meeting during all of its News Broadcasts on May 19.

EXHIBITS

The Committee furnished an exhibit at the Annual Meeting of the Illinois State Nurses Association at Urbana in October. About 1,000 nurses attended the Convention and most of them visited the booth of the Committee. As a result of the exhibit 200 new names were added to our mailing list to receive the "Do You Know" Column.

Special material was furnished the Illinois Congress of Parents and Teachers for use at its sectional meetings and for the Annual Meeting at the Stevens Hotel, Chicago, April, 1942.

PACKAGE LIBRARIES

The package library service offered by the Committee seems to fill a real need in the state and literally dozens are constantly in circulation. At the present time the public is interested in material relating to nutrition and blood plasma and blood transfusions. Many package libraries have been prepared and sent to doctors and laymen.

Some of the most popular package libraries have been those on Socialized Medicine, Accidents and First Aid, Medical Legislation, Progress of Medicine, Health Fallacies, Mental Hygiene, History of Medicine, Nutrition, Heart Disease, Nervousness, Cancer, Infant Mortality, Development and Adolescence, Public Health, Nursing, Alcohol and Health, Sulfa Drugs, Pneumonia.

"DO YOU KNOW" COLUMN

The Committee has found that the "Do You Know" column has been one of the most popular methods of bringing the story of health to the public. Many clubs not wishing to devote an entire program to a speaker on health, are willing and in fact extremely anxious to have these articles distributed at all of their meetings. A number of clubs have a standing order for a certain number of copies for each meeting. 103,966 copies of "Do You Know" were distributed last year.

Last summer the mailing list was brought up to date and those who had been receiving the material were contacted and asked to send a card indicating if they wished the service continued. 3,800 are now receiving the "Do You Know" column every other week.

The comments on these cards were highly interesting indicated the necessity of continuing this service:

District No. 5 WPA—"We duplicate the bulletins on our duplicator and place them in the hands of the teachers in the adult education Division of the Education Project of the Works Project Administration."

Health Chairman P. T. A.—"Please send me 250 copies each of your bulletins to distribute at our meeting every month."

Young Mothers Club—"We have enjoyed your health bulletins and would like to have 35 to 40 copies to pass out at our regular meetings."

Y.M.C.A.—"If it is concurrent with your policy, will you please put on your bulletin mailing list the Directors of Health and Physical Education of all our Chicago Y.M.C.A.'s."

School Nurse—"I would appreciate receiving these leaflets regularly for use on our health bulletin board."

H. S. Council Chairman—"Thanks you so much for the packages of 'Do You Know' sent for distribution at our District 25 Conference. The subjects were just what we need and were welcomed with much interest and enthusiasm as your literature always is."

Primary Teacher—"Please send me your bulletins 'Safe at Home' and 'How is their Vision', 'Burns' and any other safety material helpful for teaching safcty in primary grades."

County Nurse—"I would like my name put on your mailing list for the health bulletins on various

health topics. I am planning to teach home nursing classes in the local high school and would appreciate this material to help me."

County Nurse—"I am writing to request special articles issued by the Illinois State Medical Society on communicable diseases or other pertinent subjects that may be reprinted in the local papers or used as basis for health talks to P.T.A. or community meetings."

Civic Group—"I am chairman of the Health and Sanitation Committee of the North Side Civic Committee and would like to know if you will place me on the mailing list to receive the health articles and any other health education material released by the Educational Committee."

Oak Park High School—"Your publications under the heading 'Do You Know' which are sent periodically have come to our attention and are a matter of great interest. Any material available to high schools concerning health and applicable to our 2,000 girls would be greatly appreciated."

Gillespie, Illinois—"I am a teacher of Naturalization and Literary classes under W.P.A. I have used the 'Do You Know' bulletins as lesson material in my classes. I would like to have extra copies to use as actual reading in some of my classes. If possible, send me 10 copies each month."

The principal of a Chicago grade school is being furnished with stencils of our health articles which the students mimeograph and take home. There are about 1,000 children in this school.

A physician from South Rhodesia, South Africa asked to have copies of our material which he could mimeograph and give to the 500 students in his school.

University of Illinois—Director of Physical Education receives 20 copies each mailing.

Teachers College—Use 38 copies of each issue for senior college students in health education class.

Have requests from health teachers in New Brunswick, Canada; Indiana, Ohio, Louisiana, Minnesota, Washington, Kentucky, Michigan.

Farm Adviser—"I find your bulletins very helpful in my work."

Home Adviser—"We use many of the releases as a part of our regular study program."

Teacher Waller High School—"We read them in classes. We post some of them."

President Woman's Club—"These bulletins are read at each club meeting throughout the club year."

Colored High School—"May I please have 6 copies —one for each of our health teachers."

President Woman's Club—"I find that these bulletins are very helpful in Parent Teacher and Club work. They are splendid."

Northeast Junior College, Monroe, Louisiana—"I find this information very valuable. Thanks."

P.T.A. Council President—"I think these bulletins are marvelous."

Adviser—"I have kept a year of these for future reference. They are fine."

Southern Illinois Normal Univ. Coach & Director Physical Education—"I certainly want to stay on your mailing list for I think the bulletins are very valuable."

SCIENTIFIC SERVICE AND POST GRADUATE EDUCATION.

The reports of these two activities appear elsewhere in the Handbook. The work of the two committees is done in the office of the Educational Committee and the programs are financed through its appropriation.

During last summer a new list of speakers available for scientific meetings was compiled, printed and sent to presidents and secretaries of county medical societies. This is the most comprehensive list the Committee has assembled and many favorable comments were received from other state medical societies and from the American Medical Association.

A list of programs in the field of industrial medicine and surgery was compiled this spring and has been made available to county medical societies. With the extension of industrial plants in all sections of the state, doctors are becoming more interested in this particular field.

A special list is now being compiled of available speakers on gastric cancer and will be ready for fall programs.

The office of the Committee assembled and mimeographed copies of the scientific papers presented at the Post-Graduate Conferences. The papers were bound and mailed to all doctors subscribing for them.

RADIO

Radio programs were given over WJJD and WAAF and arrangements made for special broadcasts upon a number of occasions over WGN. Mrs. Carolyn Kehl helped with the programs over WAAF. Her broadcasts which were given with members of the Chicago Medical Society, were begun on November 1st and continued through January. These programs were very popular and brought in much "fan mail" from all over the state as well as adjoining states.

One of the interesting things which Mrs. Kehl sponsored was a script contest among some South Side club women of Chicago. The Woman's Auxiliary of the Englewood Branch offered a prize of a year's subscription to Hygeia to the woman who, in the judgment of the Educational Committee, wrote the best script on health. About twelve women entered the contest and first and second winners appeared over the radio with Mrs. Kehl and a doctor.

Some interesting programs have been given during the early spring months, for example—round table discussions of "The Medical Profession and the War," "Blood Plasma and the War," "The Chicago Medical Society and the Chicago Crime Commission", "Plastic Surgery and the War."

The policy of the Committee has been to present radio programs on subjects of current interest.

90 radio programs were sponsored during the year.

Copies of radio programs were sent to a number of downstate counties for use over local stations.

SPEAKERS BUREAU

310 Doctors addressed meetings of lay organizations in all sections of the state.

The Committee worked with the Home Bureau in planning county wide public meetings, with the Cancer Committee in sponsoring public meetings on Cancer, with the Parent Teacher Associations in special programs for Summer Round-Up Meetings, with the Chicago School Board in arranging programs for High School seniors in connection with "Vocational Guidance," with Youth Week in scheduling doctors to address student assemblies, with county superintendents of schools in furnishing speakers for Teachers' Institutes, and with the Health Chairmen of the Illinois Federation of Women's Clubs in securing speakers for district and local meetings of health chairmen.

SPECIAL SERVICE TO LAY GROUPS

Many requests have come in from public health nurses and advisers of County Home Bureaus for the Illinois State Medical Society Periodic Health Examination Blanks.

Letters were sent to officers of county medical societies explaining the purpose of the Summer Round-Up sponsored by the Illinois Congress of Parents and Teachers and stating that local groups would contact them for advice. Letters were also sent to all Summer Round-Up chairmen throughout the state advising them to contact the officers of the county medical societies before making plans for this activity in their communities. Thousands of copies of articles on "The Health of Your Child is Important" have been sent to mothers of children who will enter school for the first time this fall.

AID TO COUNTY MEDICAL SOCIETIES AND COMMITTEES

The office of the Committee assisted the Chairman of Scientific Exhibits in sending letters and application blanks and later acceptance notes to exhibitors.

Released special news stories concerning Procurement and Assignment meeting at Museum of Science & Industry.

Furnished stenographic service to officers and committees of the society.

Furnished news releases concerning the National Conference on Medical Service.

Aided Journal in writing letters, sending proof to authors, sending Journals to advertisers.

8,724 Invitations were mimeographed and sent to physicians announcing meetings of county medical societies. A number of county societies depended entirely upon the Educational Committee to furnish their scientific programs and to circularize their membership.

500 copies of Post-Graduate Conference papers sent to doctors.

Arranged programs, mimeographed material for the Maternal Welfare Committee.

NEWSPAPER SERVICE

17,098—Individual pieces of copy were released to Illinois newspapers. These included notices concerning medical meetings and the special health education column. The popularity of this health column lies in the fact that the subject matter is of current interest. A close check on all reports from the State Department of Health, on material appearing in the popular magazines, in Hygeia, in the American Medical Journal keeps the office conversant with health problems and progress. The policy of the Committee is to furnish newspaper editors with up-to-the-minute news on health matters, not to flood them with material which may be of no special interest to their readers. Clippings received in the office of the Committee indicate that the State of Illinois is widely covered.

CONCLUSION

The Committee will endeavor to gear its production to the times and tell in new methods its story of health. Certain activities of the Committee may show a reduction during the coming year, this may be especially true in the number of requests for speakers as many clubs are planning to hold fewer meetings. With this in mind, the Committee will seek to enlarge its mailing list so that the story of health will reach even more homes.

These are trying times and it is increasingly important that close cooperation continue between well organized lay groups and the medical profession. Medical science has a story for the public and it must be told and retold by using all possible avenues: speakers, radios, newspapers, exhibits.

The Committee wishes to thank the hundreds of doctors from all counties of the state who through their fine cooperation have made this report possible. They have not gone on strikes. They have not slowed-up. They have produced.

Respectfully submitted.
R. R. FERGUSON, M. D.
Chairman.
JAMES H. HUTTON, M. D.
R. S. BERGHOFF, M. D.
CHARLES P. BLAIR, M. D.
O. O. STANLEY, M. D.
MISS JEAN McARTHUR,
Secretary.

Dr. R. R. Ferguson: For the past four, five or six years the Educational Committee has been spending on an average of $1,000 a month, but during the last six to ten months it has been necessary for the Society to appropriate more money for our work, because we have taken larger space and because the Journal has an office in our office as has also the Legislative Committee. We furnish all the stenographic work and service. Our Secretary, Dr. Camp,

spends one day a week in the office. We are now spending in the neighborhood of $14,000 to $15,000 a year, so during 17 years we have spent $275,000 for the education of the public.

REPORT OF SCIENTIFIC SERVICE COMMITTEE
REPORT OF POST-GRADUATE COMMITTEE

To The Members of the House of Delegates:

Following the procedure of the past several years, we are submitting herewith the annual report covering the activities of the Scientific Service and Post-Graduate Committees, two distinct yet coordinating committees.

SCIENTIFIC SERVICE COMMITTEE

The function of this Committee remains the same as in previous years, assisting county medical societies with scientific programs, speakers and clinics and in giving publicity to these programs through the mailing of notices to doctors and the release of news items to a statewide list of newspapers.

The president and secretary of each county medical society is provided with a list of speakers to facilitate the arrangement of programs for a single meeting or for an entire calendar year. Last summer the list of speakers was re-edited and brought up to date with the addition of many new names and subjects. The booklet was printed and mailed to officers of all county medical societies. Since that time the Committee has cooperated with the Industrial Committee of the Illinois State Medical Society in the compilation of a very fine list of men especially qualified to present programs in the field of industrial medicine and surgery. County medical societies have been notified that such programs are available and no doubt the number of requests will increase with the expansion of industrial plants throughout the state.

The Committee is now in the process of compiling a similar list in the field of gastric cancer in cooperation with the Cancer Committee of the Illinois State Medical Society.

In spite of the distractions, first of national defense and later over actual entrance into the war, this important work has gone on uninterruptedly with 305 speakers presenting scientific papers. Much credit is due not only to these speakers who in spite of the additional burden imposed upon them by their participation in medical defense have yet taken time from their busy lives to carry their scientific message to their professional brethren, but credit is due also the chairmen of program committees of the many county societies for their continued interest in this work.

The services of the two Committees are at the disposal of every county in the state and it would be a pleasure to report next year that every county had obtained some type of help.

We are listing herewith the statistical report for the year:

COUNTIES REQUESTING SPEAKERS:

Adams, Bond, Bureau, Coles-Cumberland, Cook, Cass, Christian, DeKalb, DuPage, DeWitt, Douglas, Effingham, Fulton, Franklin, Greene, Henry, Hancock, Iroquois, Jersey-Green, Jo Daviess, Jefferson-Hamilton, Jackson, Kane, Kankakee, Knox, LaSalle, Livingston, Lee, Lake, Madison, McLean, Monroe, Macon, Morgan, Macoupin, Marion, McDonough, Montgomery, Perry, Randolph, Rock Island, Stephenson, Southern Illinois Medical Association, Saline, Sangamon, St. Clair, Scott, Tri County, Tazewell, Union, Vermilion, Will-Grundy, Winnebago, Whiteside, Williamson, Warren.

SUBJECTS REQUESTED FOR DISCUSSION:

Anemia, Asthma, Anesthesia, Cancer, Dermatology, Eye, Ear, Nose and Throat, Endocrinology, Fractures, Goiter, Gastro-Intestinal, Heart, Hematuria, Infections, Industrial Medicine, Indigent Care, Jaundice, Medical Economics, Nutrition, Neurology, Orthopedics, Obstetrics and Gynecology, Pneumonia, Pediatrics, Plastic Surgery, Poliomyelitis, Psychiatry, Peripheral Vascular Disease, Rheumatism and Arthritis, Surgical Problems Head and Neck, Skull Fractures, Sulfa Drugs, Surgery, Urology, X-Ray and Radium.

POST-GRADUATE COMMITTEE

Two years ago the House of Delegates authorized the Post-Graduate Committee to conduct through the facilities of the Scientific Service Committee, four one day conference courses in various sections of the state. The success of this type of program broadened to nine such conference days last year and nine again this year.

One meeting differed very radically from the rest in that it was an all day conference course with Missouri and Illinois participating. This meeting under the direction and auspices of the Post-Graduate Committee of the Illinois State Medical Society was held in Belleville, Illinois on April 9th under the general chairmanship of Dr. G. C. Otrich. The meeting began at 9:00 A. M. with half hour talks, alternating Illinois and Missouri speakers. Dr. Hugh C. Neilson of St. Louis, Chairman of the Missouri Post-Graduate Committee presided at the luncheon. The afternoon session ushered in a new type of post-graduate instruction, a Heart Forum, participated in by Doctors James G. Carr of Chicago and Drew Luten of St. Louis. For one hour these two outstanding cardiologists answered questions directed to them from the audience. The day ended with a dinner meeting presided over by the Chairman of the Post-Graduate Committee of the Illinois State Medical Society. Brief talks were given by Dr. Charles H. Phifer and Dr.

Harold M. Camp, President and Secretary of the Illinois State Medical Society, D. R. R. Cross, Director of Public Health of the State of Illinois and Major M. E. Hartlett of the Selective Service System. The guest speaker of the evening, Colonel Paul G. Armstrong, Director of Selective Service of Illinois, delivered a practical and powerful message. This joint meeting between Illinois and Missouri was a successful venture and brought out a large attendance.

The nine Post-Graduate Conferences held during this past year were highly successful as judged by the large attendance, the high caliber of lecturers and the interest maintained in them.

Those Conferences where time was devoted to Round Tables seemed to be the most satisfactory, in that men attending the conference could discuss problems with the speakers in a small group. They also gave opportunity for the local men to participate in the programs.

This year the Post-Graduate Committee also inaugurated another plan of taking orders for copies of the papers presented at the various conferences. A hundred or more doctors paid one dollar and received copies of papers presented at all nine conferences while others paid twenty-five cents which entitled them to copies of the papers presented at one conference.

Members of the House of Delegates no doubt will be interested in reviewing the subjects which were requested for presentation: Medical Care Public Assistance Recipients, Endocrinology, Gall Bladder, Dermatology, Obstetrics and Gynecology, Fractures, Tumors, Heart, War Medicine, Heart Clinics, Pediatrics, Pneumonia, Eye, Ear, Nose and Throat, Blood Dyscrasias, Nephritis, Gastro-Enterology, Psychiatry, Urology, Geriatrics, General Medicine, Orthopedics, Sulfa Drugs, Shock.

The Post-Graduate Committee would like to make the following recommendation concerning the Conference Day type of post-graduate teaching:

We realize that because of the ever increasing demands upon the time and energy of physicians incident to the war it will become increasingly difficult to arrange such programs and that attendance at such meetings will possibly fall off, yet we feel this type of instruction is vitally essential. Accordingly, we suggest that for the year ahead, four such conference days be authorized, one for each section of the state and that the programs include particularly the newer phases of military medicine.

We feel convinced the doctors of our county medical societies throughout the state want this type of post-graduate training and that there is a vital need for it.

This Committee as in previous years, feels deeply indebted for the very active cooperation of the Secretary of the Illinois State Medical Society, Dr. Harold M. Camp, to Jean McArthur and her associates, and to the loyal and energetic secretaries of the county medical societies who make very simple this otherwise formidable task.

Respectfully submitted,
ROBERT S. BERGHOFF, M. D.
Chairman
JAMES H. HUTTON, M. D.
J. S. TEMPLETON, M. D.
FREDERICK S. FALLS, M. D.
WALTER STEVENSON, M. D.
*G. H. AYLING, M. D.
H. M. CAMP, M. D.
Scientific Service Committee.
ROBERT S. BERGHOFF, M. D.
Chairman
R. R. FERGUSON, M. D.
CHAS. P. BLAIR, M. D.
F. GARM NORBURY, M. D.
WALTER STEVENSON, M. D.
B. E. MONTGOMERY, M. D.
Post-Graduate Committee.

* *Deceased.*

REPORT OF MEDICAL ECONOMICS COMMITTEE

To The Members of The House of Delegates:

The primary function of the Committee on Medical Economics is to study economic problems among the physicians and the public, and to extend efficient distribution of medical care to all of the people. This care must be efficient, for no other type of care will meet the standards of the profession or the demands and requirements of the public. That we have already attained efficient medical care and a wide distribution of the same is emphasized by the fact that we are the healthiest nation in the world.

The medical profession itself cannot prosper under any other system because either inefficient service or the lack of distribution of that service will cause the public to lose confidence in the medical profession, and resort to various sorts of "pathies" and definite forms of quackery which in the end defeats the sole purpose of progressive medicine and ends in an impairment of our national health.

It is true that the rapid progress of medical science both in the diagnosis and treatment has added to the cost of medical care but we must remember that the prevention and almost total elimination of many diseases has reduced the total cost of medical care, and if this total is to be considered, the increased cost is not outstanding. Other costs have also increased such as travel, communication, etc., but again a better service has been established and a better economy produced.

The outstanding phenomena of the last ten years in the field of medical economics—events which may indeed have rivaled many of the scientific achievements of that period in the universality of their interest among physicians throughout the country—have been the development of hospitalization insurance

plans, particularly those presented by hospitals themselves through their "service associations," and the introduction of pre-payment plans for medical care under the sponsorship of several state or county medical societies.

It is unlikely that any physician who has been active in the practice of his profession, in attendance at medical meetings or in reading professional periodicals during the past few years can have remained unaware of the development of these programs which have already importantly affected the attitude of the public toward the purchase and use of medical and hospital services. Yet it is true that relatively few physicians have taken the time to study these operations—and their implications—with sufficient care to recognize their lasting importance in the professional scene. Whether we as individual physicians approve or disapprove such developments as these is not important; the fact is, they have introduced certain changes in our relationship to the public. The proper discharge of our professional duties is no longer possible without at least our passive participation in them.

Thus a knowledge of the essential facts of the operation of hospitalization insurance and medical care plans may be said to have become a professional obligation. Further than that, to the extent that the attitudes and actions of physicians individually and in groups may affect the future of these plans, we have an obligation to inform ourselves and to make every effort to guide the development of the plans in the public interest.

The present report, embodying a summary appraisal of hospitalization insurance and medical care plans as they are operating in the United States today, is offered for the information and guidance of physicians who may not have had the opportunity to keep abreast of all the published material in this field as it has appeared in the periodical literature and in special publications released from time to time by various organizations engaged in the operation of hospitalization and medical care plans. It is not intended that the report shall convey any implication of approval or disapproval of the organizations discussed; the conclusions and recommendations included are simply those which appear to be inescapable on the basis of the facts presented.

HOSPITALIZATION PLANS

I. HISTORY.

While the existence of earlier plans is a matter of record in several communities, the first hospitalization program to receive wide public attention was the one organized at the Baylor University in Dallas, Texas, in 1929. The early "Baylor Plan" was the simplest possible application of the insurance principle to the risk of hospitalization expense: a group of faculty members contributed monthly "dues" to a hospitalization fund which was used to reimburse the University hospital, at an agreed rate, for service rendered to members of the group and their families. The plan appeared to benefit alike each of the three groups interested in its operation: university families were relieved of the worry of expensive hospitalization and of the necessity for making substantial cash payments in the presence of illness requiring hospitalization: the hospital gained from improved occupancy (accountable by the admission of patients who might have insisted on home treatment had they been compelled to carry the full burden of hospitalization expense), and from the prompt and complete payment of patients' bills without any write-off of uncollectable items or any collection expense; physcians were insured of best results in the medical management of disease and injury when the chief (financial) resistance to hospitalization was eliminated, and when severe financial worries were not present to upset the patient emotionally and interfere with convalescence.

Inevitably, success of the Baylor plan became known among hospital people, and within a few years similar programs were inaugurated in several other communities—notably in the East, where the hospital plan at Newark, N. J., was the first to enjoy rapid growth throughout the employed population. Similar to the Baylor plan in principle and purpose, the plan at Newark and those which were organized during the early 1930's in Cleveland, New York, Minneapolis, Sacramento and several other cities differed in one important detail: membership was available to all the employed groups in the community instead of to one only, and all the hospitals, instead of only one, offered service at the group rate.

It is often claimed that these "hospital service associations" were essentially schemes launched by hospitals to fill empty beds and supplement dwindling revenues during the depression years. Certainly it is true that the organizers of the hospitalization plans were in every instance wholly dependent on hospital support for the birth and development of their programs. Whether the hospitals were moved initially by a desire to fill beds and improve revenues or by a genuine wish to relieve the economic burden of hospitalization for the public is entirely unimportant today. Both results have been achieved—probably in a measure far surpassing the expectation of all hospitals participating in the earlier phases of the movement. Moreover, the public assistance furnished by the plans today is more largely an unmitigated benefit than any advantage which accrues to hospitals from the plans' operation, since the plans have themselves created many specific problems for hospital managements.

II. American Hospital Association Program

Growth of the hospitalization plans during the latter half of the 1930's was rapidly accelerated. Figures released in February 1942 by the American Hospital Association clearly indicate the size and speed of the movement's activity during those years. Total enrollments in plans approved by the association were:

	Members
December 31, 1936	600,000
December 31, 1937	1,400,000
December 31, 1938	2,900,000
December 31, 1939	4,350,000
December 31, 1940	6,200,000
December 31, 1941	8,500,000

By 1937, Plans had become a sufficiently important feature of hospital operation for the American Hospital Association to establish a Commission on Hospital Service Plans for the purpose of gathering information and data on plan operation, acting as a clearing house of experience for established plans and advising hospitals and communities contemplating the organization of new plans. Shortly, the Commission formulated a set of "Standards for Approval" of hospital service plans; with minor revisions and refinements, these are the standards by which the seventy-one plans approved by the Association are judged annually for "re-approval" today. The standards, briefly stated, follow:

1. The corporate body should include adequate representation of hospitals, the medical profession and the general public.

2. No private investors should advance money in the capacity ofstockholders or owners.

3. Plans should be established only where needs of a community are not adequately served by existing non-profit hospital service plans.

4. The hospital service benefits should be guaranteed by member hospitals during the life of the subscriber-contracts. Thus:

(a) Benefits should be expressed in "service contacts" which describe specifically the types and amounts of hospital services to which the subscribers are entitled.

(b) A majority of the hospitals of standing should be member hospitals in each area where subscribers are enrolled and arrangement should be made for provision of service in non-member hospitals.

5. Subscription payments should be divided currently into "earned" (payment for past period) and "unearned" (payment for future period) income, and earned income should be apportioned to special accounts, as:

(a) Hospitalization (60 to 80 per cent).

(b) Contingency Reserve (5 to 10 per cent, unless otherwise designated by law).

(c) Field Service and Administrative Expense (not to exceed 15 per cent after plan is well established).

6. Statistics should be maintained currently to include: number of subscribers (classified), number of hospital admissions (classified), number of patient days of care (classified) and number of member-months of protection furnished to subscribers (by classification).

7. Statements of operation and condition should be prepared by certified public accountants at regular intervals, at least annually.

8. Annual re-approval shall be based on: proper standards of organization and public policy, substantial number of enrolled subscribers, and financial standards and operations which adequately protect the interests of subscribers and member hospitals.

9. Payments to hospitals shall be based on the cost of services provided to subscribers in hospitals of that community.

10. Employees should be reimbursed by salary as opposed to a commission basis; no outside organization or agency should be given responsibility for promotion or administration; promotion and administrative policies should be dignified in nature, consistent with the professional ideals of hospitals and in accord with economically sound practice as determined by actuarial and financial experience.

11. The hospital service to be provided should be determined by the practice of the various participating hospitals.

12. Hospital service plans should not interfere with existing relationships between physicians and hospitals or between physicians and patients.

The Commission on Hospital Service Plans operated for several years under an informal affiliation with the American Hospital Association. The affiliation became official in 1941 when the Association's bylaws were amended to permit the inclusion of approved hospital service plans as institutional members of the Association, to provide for representation of the plans in the Association's house of delegates, and to give the elected plan commission formal standing within the Association's executive structure. Thus, actually, hospitals themselves have given full recognition to hospitalization insurance plans as a permanent fixture in the field of hospital operation.

III. Action of the American Medical Association

Acknowledging the direct effect of hospitalization insurance on the circumstances surrounding the admission and discharge of hospital patients and the practice of medicine in hospitals, the American Medical Association's house of delegates in 1937 adopted principles which were considered necessary to safeguard the quality of medical service under hospitalization insurance. Many of these principles repeat or serve in large part to duplicate the standards already adopted in the public interest by the American Hospital Association. Additional principles enunciated by the American Medical Association may be summarized briefly as follows:

1. The majority of the governing body should be chosen from among members of official hospital groups and members of medical societies. Great care should be taken to assure the nonprofit character of these. . . .ventures.

2. Qualifications of participating hospitals should be closely supervised. . . and members should be limited to those on the Hospital Register of the American Medical Association or those approved by the state departments of public health or other state agencies.

3. The medical profession should have a voice in the organization and administration of the plan. Since hospitals were founded to serve as a means of facilitating the practice of medicine, the medical profession must concern itself intimately with plans likely to affect the relations of hospitals to physicians.

4. The subscriber's contract should exclude all medical services—contract provisions should be limited exclusively to hospital facilities. If hospital service is limited to include only. . . bed, board, operating

room, medicines, surgical dressings and nursing care, the distinction between hospital service and medical service will be clear. (This principle was amended in 1938 to include also the following statement: If for any reason it is found desirable or necessary to include special medical services such as anesthesia, radiology, pathology or medical services provided by outpatient departments, these services may be included only on the condition that specified cash payments be made by the hospitalization organization directly to the subscribers for the cost of the services.

5. There should be an upper income limit for subscribers.

For the most part, plans approved by the American Hospital Association operate also entirely within the spirit of these principles adopted by the American Medical Association; the notable exception is the principle stating that plan contracts must not include medical services as benefits. Actually, more than half the approved plans do include as benefits some or all of the services named. Since many of the plans which do include these medical services as benefits have the whole hearted support and official endorsement of the local city, county or state medical society, it appears that the feeling on this particular point is not uniform throughout the profession. In some instances, of course, the local medical society has refrained from giving support or has actually opposed the hospitalization plan on the grounds that inclusion of radiologists' and pathologists' services in the hospitalization contract constitutes practice of medicine by a corporation and that the solicitation of membership among employed groups, in such instances, comprises the advertising and selling of medical services contrary to the ethical principles of the American Medical Association. Hospital plan organizations, on the other hand, have maintained that the inclusion of such services as radiology or pathology in the hospitalization contract necessarily indicates that these services, from the financial standpoint at least, have always been handled as hospital rather than as medical services. The fact that the service of the radiologist, for example, may be paid for by the patient through membership fees in the hospitalization association rather than direct at the time of admission or discharge does not seem to change the ethical or professional aspects of the problem materially. Both payments are made directly to the hospital rather than to the professional practioner. The hospital plans have simply taken a service which was available in the hospital and usually billed to the patient by the hospital, and arranged for a new method of payment for such bills. Whether or not it is proper for hospitals thus to control or manage the practice of such specialties as pathology and radiology is the real principle involved, the hospital plans point out, and the plans themselves are not a major party to the discussion of that problem.

Except in rare cases where it has been claimed that the volume of work in hospital radiology and pathology departments has increased so largly due to the operation of the hospital plan that the actual quality of the service rendered has been affected adversely, no serious charge has been recorded against the hospitalization plans for lowering the quality of medical care or even for interfering with the ordinary physician-hospital or physician-patient relationships.

IV. Present Status of Hospital Service Associations

On March 31, 1942 it was reported that the approved hospital service plans had enrolled more than nine million persons as subscribing or participating members. Over half the voluntary hospitals of the country are participating member institutions in one or another of the plans; these hospitals represent two-thirds of the nation's hospital bed capacity. Further indications of the present size and scope of the hospitalization movement are contained in these additional figures for the year 1941: Approved plans (in the aggregate) received $48,797,440 in subscription fees paid by members; $34,493,015 (70.6 per cent of income) was paid to hospitals as reimbursement for services rendered to members; $5,967,881 (12.20 per cent was spent in the acquisition of members and administration of the plans; $8,337,044 (17.20 per cent) was added to reserve funds maintained against future hospitalization requirements.

The financial condition of the approved plans is uniformly good today. On several occasions in the past—notably in New York City in the Spring of 1939—it has been necessary for the hospital service associations to reduce the rates paid to member hospitals in order to maintain current obligations without reducing the hospital service benefits to which subscribers were entitled, until proper adjustments could be made in the subscription rates and existing contracts had been fulfilled. Attributed at the time to epidemics of respiratory infection resulting in heavy demands for hospitalization, it seems likely now that these conditions were contributed to also by contracts that were too liberal, careless enrollment practices and abuse of hospitalization benefits by both subscribers and hospitals. Each such circumstance involving an approved plan has been rectified financially, contracts and enrollment practices have been refined to provide the best known balance of liberality and safety; many abuses have been eliminated from plan operation.

In most states, hospital service plans operate under the supervision of the state department of insurance, usually under special legislation specifically exempting the association from taxes levied against private insurance operations and stating the precise extent to which the state department may exert control. Relationships between the plans and such governmental bodies have been healthy; state departments have acted without exception in the public interest in rulings affecting hospitalization plans.

There are six approved hospital service plans operating in the State of Illinois, with headquarters at Alton, Chicago, Danville, Decatur, Peoria, and Rockford. Total membership in the Illinois plans was approximately 500,000 at the end of the first quarter of

1942. Largest of these plans is the Plan for Hospital Care, Chicago, with 375,000 members. This Plan paid $2,000,000 in hospital bills in the greater Chicago area in 1941, used only 12 per cent of income for all operating expenses and added substantially to an earned reserve now totaling $750,000.

V. How the Plan Works

Differing in the detail of their rate and benefit schedules according to variations in local hospital practices and prices, the hospital plans are all alike in general structure—and all based on the same simple principles outlined in general structure—and all based on the same simple principles outlined in connection with the earlier description of the plan at Baylor University and the enlarged plan at Newark, N. J. Thus today:

(a) Members pay small monthly fees, usually collectible at the wage-earner's place of employment through the salary deduction or "check-off" system, according to the type and amount of service included in the plan, and

(b) usually with a top rate of eighty cents for the single subscriber and a dollar and a half or two dollars a month for the family group, regardless of the number of persons covered.

(c) For this fee, the plan offers each member a contract which provides the member with essential hospital services *free of charge* for a total of three weeks or a month each year.

(d) Under separate contracts with the plan, participating hospitals agreed to render the stipulated services without collecting from the member, and to accept a fixed per diem payment from the plan to settle the account in full for all specified services.

At the eighty cent rate or its equivalent, service provided usually includes bed and board in semi-private hospital room, general nursing service, use of the operating and delivery rooms, drugs, dressings, ordinary medications, routine laboratory examinations and perhaps radiology and pathology service as required. Waiting periods, restrictions and qualifications are generally held at the minimum that is consistent with adequate protection against abuse of membership privileges by venal subscribers; the administration of claims for benefits is characterized in most plans by a policy of liberality of interpretations within the framework of the subscriber's contract.

About half of the approved plans offer "ward service" options for a lower membership fee. Like the semi-private contracts, these provide an inclusive service with the benefit expressed in terms of hospital services to be rendered without charge to the member; the only difference is in the price of the membership and the type of hospital accommodation which the member is entitled to occupy.

VI. Other Types of Hospitalization Insurance

This discussion has dealt exclusively with the service association offering memberships whose benefits are actually rendered by hospitals. Most life and accident and health insurance companies and many casualty companies today offer group or individual policies which provide indemnities in the form of cash reimbursement against the expense of hospitalized illness. Such policies take the form of simple financial contracts between the patient and the company; the hospital is not a party to the contract, as it is in the case of the service association, nor does the physician become involved through his close connection with the hospital.

Many physicians have asked why, since this is the case, their support should not be given to this simple, cash arrangement instead of to the service associations. It is not the purpose of this report to make any comparison of the relative advantages of "cash" as against "service" hospitalization insurance. The public seems to have found its own answer, reflected in the purchase of nine million memberships in the service plans. For physicians, one additional point should be mentioned here: Service plans, for the most part, restrict benefits to hospitals registered by the Council on Medical Education and Hospitals of the American Medical Association; some require further that participating hospitals have the full approval of the American College of Surgeons. By denying benefits in all substandard institutions, these plans thus exert a powerful influence on the public to support approved, qualified hospitals and ethical physicians, and on the other hand to discourage unqualified institutions and unethical practioners. The hospitalization plans operated by insurance companies and associations not approved or supervised by the American Hospital Association make no distinctions among institutions; they pay claims alike in the great medical centers and in the advertising "hospital" operated by the quack or cultist. The insuring company or agency is not to be blamed for this; it sells a cash indemniity and is not in a position to distinguish among institutions which call themselves hospitals. The fact is brought out here as an explanation of the support for service plans which is sought, usually by hospitals, from physicians.

VII. Trends in Hospitalization Service

During the past few years, leaders of the hospital service plan movement have devoted considerable thought and effort to the standardization of contracts, procedures and policies on a national basis. Recognizing that differences in hospital prices and practices among communities and regions may always make it impossible for the plans to achieve complete nationwide uniformity of rate and benefit schedules, they have realized the advantages of working toward uniformity in such matters as enrollment requirements and methods, accounting and statistical procedures, claims policies and—perhaps most important from the standpoint of public policy—public relations programs. Indications that these efforts have been successful are numerous: many nationwide companies have enrolled their employees simultaneously in hospital service

plans available to their various plants and offices located throughout the country; in many cases, such an arrangement is handled entirely through the plan located in the company's "home city," the local plan acting as agent for affiliated associations; more and more, the plans are adopting practices and policies proved to be successful in other communities and made available through the American Hospital Association's research program or through the exchange of information at meetings of plan executives. The trend is continuously toward standardization, stabilization and uniformity. The plans have also worked steadily toward the perfection of "reciprocity agreements' which make it possible for a plan member from one city to receive benefits in event of hospitalization anywhere else and to retain his membership through changes of residence and employment.

The immediate effect of the war program on hospital service plans has been an acceleration of enrollments as employment has increased everywhere, as wages have improved and as more and more employers have become concerned about the health and welfare of employee groups as an essential to vital war production objectives. Certain other effects of the war on hospitalization plans seem inevitable: As hospital costs rise in the face of personnel and labor shortages, advancing costs of drugs, linens, metals, rubber goods and foods, the rates of hospital plan payments will become inadequate to cover services listed in the subscriber contracts; increased payments to member hospitals have already been started by most plans, and further increases are inevitable—probably in most cases to the point of compelling the revision of subscriber contracts either to restrict the hospital service included or to raise the subscription rate. With employment conditions remaining stable, this adjustment should be possible of accomplishment without noticeable loss to the plans. So also should be one other adjustment which will probably be required as the war effort grows in intensity: the transfer of employed subscribers from one group to another as more and more workers shift from businesses curtailed or closed for the emergency into expanding war industries. It is expected that the loss of membership as workers are called into the armed services will continue to be offset by employment gains attributable to war conditions.

VIII. Proposed Amendment to the Social Security Act

On January 9, 1942, President Roosevelt stated in his message to Congress accompanying the budget: "I recommend an increase in the coverage of old age and survivors' insurance, addition of permanent and temporary disability payments and hospitalization payments beyond the present benefit programs, and liberalization and expansion of the unemployment compensation in a uniform national system. I suggest that collection of additional contributions be started as soon as possible, to be followed one year later by the operation of the new benefit plans.

"I oppose the use of payroll taxes as a measure of war finance unless the worker is given his full money's worth of increased Social Security."

Subsequent informal meetings of the Social Security Board and a delegation representing the American Hospital Association revealed that the following program was contemplated in fulfillment of the President's recommendation for a hospitalization benefit:

1. That the contribution toward the hospitalization payment would be 1 per cent of each worker's salary or wages, half of this amount to be paid by the worker himself through a compulsory payroll deduction, the other half to be paid by the employer as a payroll tax.

2. Payment to the worker of a minimum sum ($3.00 was mentioned in the discussions and was later widely talked about as a definite stipend, though the Social Security Board denied that any specific amount or plan had been determined upon) per day in the event that he or any member of his family requires hospitalization.

Since the President's proposal and the discussions which followed with representatives of the American Hospital Association immediately became the subject of widespread discussion and controversy among hospital administrators, physicians and hospital service plan executives, the following excerpts from a letter addressed on March 3, 1942, to the president of the American Hospital Association from the chairman of the Social Security Board appear to merit inclusion in this report:

." . . . there is as yet no detailed plan for hospitalization payments and certainly nothing in the nature of a final plan which might be considered the government's proposal.

"We have recognized from the beginning of our studies that hospitalization payments through the social insurance (Social Security) system could take several different forms. . . Each general approach to the problem has advantages and disadvantages that are being carefully weighed.

"The board has invited comments and suggestions from interested groups. We have undertaken to consider . . . the possibility that the beneficiary under a cash benefit system could have the right to assign his benefit to the hospital which furnished the service or to a voluntary hospitalization plan of which he may be a subscriber.

"It has been contemplated from the beginning that hospitalization payments should be made in respect to hospitalization service received in existing hospitals and with the fullest use of practices developed by professional and other agencies for the approval of hospitals as qualified institutions.

"A social insurance system does not and need not undertake to furnish complete protection to all whom it covers under all circumstances. The social insurance approach is to assure that the benefits would provide a minimum protection, leaving to the individuals the responsibility of buying additional protection from private sources through their private means."

Official and unofficial reactions to the proposel have covered every degree of support and opposition. An editorial in the Journal of the American Medical Association urged postponement of the proposed amendment until after the war crisis, on the grounds that this is not a proper time to undertake changes which might have far-reaching effects on our social and professional systems. In an address to hospital service plan executives, D. S. S. Goaldwater, president of Associated Hospital Service of New York, largest of the voluntary service plans, stated: "We are asking the government to encourage us in the work we are seeking to do, rather than hampering us by ill-advised interference, however well meaning, which offers a serious threat to the voluntary hospital system and to free medicine." The president of the American Hospital Association, on the other hand, declared: "All our activities and enterprises are being altered to the pattern of a wartime economy. The economics of hospital care can hardly be an exception. Many may brand such opinions as radical. Five years from now it may be said that they were only realistic. It is believed by many that a poll of the hospitals in the country would show a considerable majority in favor of some such plan as the one under discussion."

Briefly summarized, the chief arguments advanced against the proposal have been:

1. That the government should not undertake a function which can be performed by voluntary agencies.

2. That waste will occur under government administration of hospitalization payments.

3. Not dangerous in its present form, the plan may become a threat to voluntary hospitals and private practice of medicine.

4. Patients will expect complete hospital care for the minimum payment, which is inadequate to provide it.

5. The plan will result in a burden on existing hospital facilities.

6. It will tend to lower hospital standards and the quality of hospital care.

Rebuttal arguments have generally followed the line of thought suggested in these brief statements:

1. After ten years, the voluntary plans are reaching only nine million persons, whereas the Social Security payments would provide protection for as many as 100,000,000.

2. Objection is without foundations.

3. Objection is without foundation.

4. The chairman of the Social Security Board has stated that the protection provided is to be considered minimal and partial.

5. It is denied that the additional demand for hospital care will become an unsupportable burden on hospital facilities.

6. Objection is without foundation unless one insists that the minimum hospitalization payment will be expected to include complete care.

While the chairman of the Ways and Means Committee of the House of Representatives has recently declared that "Social Security taxes are not included in our present deliberations," which is taken to mean that further consideration of the proposed amendments will probably await general revisions of the federal budget later in the year, it seems likely that within the predictable future the hospital and medical professions will face the immediate prospect of including the federal government as a partner to their activities to the extent outlined in the present proposals. It is, of course, impossible to say whether or not this program should be considered as a temporary "war measures", and whether it would be dropped, continued or expanded after the war.

The initial adoption of any such program as well as the future course it may follow after its introduction may depend on the extent to which voluntary agencies expand in the near future to include those whom it seeks to protect. Thus the Commission of the American Hospital Association is urging establishment by all hospital service plans of the "ward service" option now offered by about half the plans, such plans to provide minimum hospital accommodations at low family subscription rates. Such expansion of the existing successful voluntary agencies might indeed have a bearing on any future action by government in this field, particularly if it were to be accompanied by a widespread disposition on the part of all corporations to assume the greater responsibility for the welfare of employees which has been characteristic of some few employers in recent years, even to the extent of making participation in voluntary hospitalization insurance plans compulsory on all employees and contributing toward the cost of such protection for employees in the lower income brackets. It is not unlikely that some such effective cooperation between industry, private social agencies and the professions may prove to be the only means of preserving many of our cherished institutions and methods throughout the next few years.

PREPAYMENT PLANS FOR MEDICAL CARE

I. History

Most physicians realize that there is nothing new about prepayment plans for medical care. "Contract practice" plans—which are prepayment plans, usually restricted as to the nature of the medical service provided, limited to the employed population of a single enterprise and controlled by agreement between the participating physicians and the corporate management—have been in existence for years in the lumber, mining and railroad industries. Replies to a "group practice" questionnaire issued by the American Medical Association nearly ten years ago indicated that twenty of these groups were offering medical service at that time under one or another form of periodic payment arrangement. Peculiarities in the Workmen's Compensation laws in the state of Washington and Oregon, which provide that the employer may make deductions from the employees' wages to pay

for medical services, gave rise to the development of private corporations organized to contract with employers for the provision of medical services in compensable cases; these corporations extended their coverage later to noncompensable services, then to dependents and even in a few instances to the general public.

In none of these cases, however, had the prepayment arrangement been organized in response to a widespread public demand for any such arrangement, and, with the exception of the plans operating in the state of Oregon, where in 1937 it was estimated that almost 100,000 persons were covered by prepaid medical care, in no case did the programs reach a significant section of the population:* Demand for this type of service during the depression years resulted in the formation of numerous so-called "consumer group" plans, in which the employees of a single industry or municipality or the members of a union undertook the responsibility for formulating and administering a medical care plan for members of the group. Typical of yet another early type of prepayment plan, the "producer group" plan, is the Ross-Loos Clinic of Los Angeles, in which the physicians took the initiative in agreeing to provide medical service for a stipulated monthly fee.

II. Medical Society Prepayment Plans

Unquestionably, the rapid growth of hospital-sponsored hospitalization insurance plans during the 1930's contributed largely to the expression of public demand for similar protection against medical expense. It was natural that the discharged patient, leaving the hospital without the necessity of paying a sizeable bill, should say to himself, "Now, if I can just make the same kind of arrangement to take care of the doctor's bill—"Hospital plans reported subscribers by the hundreds who inquired about the possibility of getting medical insurance. Many county and state medical societies sought for means to establish such plans under proper medical control. By the summer of 1941, the Bureau of Medical Economics of the American Medical Association reported that there were twenty state medical societies that had "taken some steps" toward the establishment of medical service plans to operate on a statewide basis. Several such plans have been in operation long enough to have accumulated experience which should be of some value to the Illinois State Medical Society in its consideration of the advisability of introducing any such program within its jurisdiction.

(a) *Michigan Medical Service.*

The Michigan Medical Service, organized by the Michigan State Medical Society in 1939, is by a wide margin today the largest prepayment plan for medical care in the United States. Operating under an affiliation agreement with Michigan Hospital Service, the approved hospitalization plan which is also state-wide in scope, the Medical Service reported an enrollment of 451,533 members at the end of December 1941.

The formation of Michigan Medical Service was preceded by several years of studies, authorized by the State Medical Society, of the "distribution of medical care" throughout the state. In addition to these studies, the preliminary effort included action to obtain legislation permitting the formation of a corporation to offer medical service insurance under the state laws, and an educational campaign to explain the Society's objectives to physicians, employers and the general public throughout the state. On the basis of actuarial data developed from the report of the Committee on the Cost of Medical Care and from a special study of the experience of the Associated Hospital Service of New York, which had then been in operation for about four years, specific schedules of rates and benefits were drawn up early in 1939, an intensive program to explain the proposed plan to physicians was undertaken and the plan was publicly launched early in 1940. The experience of Michigan Hospital Service up to that time had revealed a heavy public demand for surgical service and a much lesser demand for complete medical service, with the result that the original proposals were revised to permit the purchase of "surgical benefits" separately from complete medical service at a substantially reduced cost to the subscriber.

Similar in general structure to the approved hospitalization plans, with participating physicians serving as "guarantors" of the service benefits much as participating hospitals do in the hospital plans, Michigan Hospital Service offers the following services:

SURGICAL PLAN

Monthly Cost

Individual	$0.50
Husband and wife	1.25
Family	2.00

Benefit Provided

(a) All surgical service rendered to hospital bed patients.

(b) Diagnostic x-ray service not to exceed $15 yearly.

(c) Maternity care after 12 months of membership.

MEDICAL PLAN

Monthy Cost*

Individual	$2.00
Husband and wife	3.50
Family	4.50

*Inclusive of and not in addition to cost of surgical benefit, which is part of the complete medical plan.

Benefits Provided

(a) Medical and surgical care including home, office and hospital visits.

(b) Consultations and special services such as x-ray, laboratory and anesthesia service performed by M.D.

**Rural prepayment plans organized under the Farm Security Administration, beginning in 1936 in several midwestern farm states, might be considered another execption, although these plans were limited to indigent and near-indigent families.*

(c) Maternity care after 12 months of membership.
(d) First $5.00 of service deductible each year; yearly limits established at $325 for individual, $550 for husband and wife, $875 for family.

As originally proposed, membership in both plans was to have been limited to individuals with annual incomes not to exceed $2,000 and families with annual incomes of not to exceed $2,500. Preliminary presentations of the proposed plan to prospective industrial groups, however, indicated substantial resistance to the income limitation feature, and the plan was revised to permit the enrollment of members above the stated income levels but to provide that physicians attending these members may collect additional fees for such service over and above the fees paid to them by Michigan Medical Service. Participating physcians agree to accept as *payment in full* for service rendered to members below the stated income levels a schedule of fees established by the Michigan Medical Service. The schedule is based on composites of numerous schedules in use under workmen's compensation, Veterans' Administration, Farm Security Administration, state and county medical society plans and other agencies and, it is claimed, "compares favorably with the fees usually charged to persons in the income groups served" by Michigan Medical Service. Payments for services not included in the fee schedule are determined by a Medical Advisory Board. The agreement between Michigan Medical Service and participating physicians also provides that payments to physicians may be made on a pro rata basis if current funds are not at any time sufficient to meet payments at 100 per cent of the stated fee schedule.

From the beginning, a major financial and operating problem in Michigan Medical Service has been created by the failure of physicians to report promptly following attendance on plan members. As early as November 1940, after less than a year of operation, the management felt that it was necessary to add eighteen per cent to current claims totals to allow for the "hidden liability" of unreported and incomplete cases, and at that same time there were already many instances of claims reports being submitted six to eight months after the service had been rendered. That this has remained a serious problem is indicated in a footnote to a January 1942 report of payments to physicians during the previous year. The footnote reads: "There will be additional payments in several of the later months of 1941 as soon as complete information is received from the doctor to permit authorization of benefits."

Any impartial analysis of Michigan Medical Service from a financial standpoint must necessarily conclude that the operation has been far short of satisfactory. After only thirteen months of operation, it was necessary to reduce the payments to physicians to 80 per cent of the fee schedule. Payment at 80 per cent was continued for five months, and on October 1, 1941 payments were resumed at 100 per cent. While the payments have continued at 100 per cent during the early months of 1942, a large accrued liability to participating physicians, accumulated during the months when the pro rata payment was in effect, is believed to remain unpaid. A published report attributes the necessity for the pro rata payments to "the combination of a greatly increased volume of services and late reporting." It is explained that a large new volume of memberships creates an immediate heavy demand for service in the form of common elective operative procedures. "One half of the common surgical operations such as appendectomies and tonsillectomies required by a group of subscribers will be performed during the first few months of enrollment," the report states. While there is unquestionably a reasonable tendency on the part of new subscribers to seek immediate care for conditions of long standing, the statement in the report lacks specific figures in proof.

Seeking further explanation of the continued financial difficulty which the plan has experienced, insurance experts point to two additional factors which are believed to contribute toward instability. These are: (1) lack of limitations in the service contract, and (2) emphasis on promotion in the operation of the plan.

(1) *Lack of limitations in the service contract.*

While it is accepted insurance practice to assume group risks "as is" without serious restrictions based on pre-existing conditions provided the percentage of participating members to the total group is high enough, and while it appears that the percentage of participants in Michigan Medical Service has been generally satisfactory, the liberal benefits offered under the "surgical plan" may be seriously questioned in view of the relatively low rates charged for membership, *particularly as these benefits and rates apply in the case of family members of employed subscribers.* It may be significant to observe in this connection that the large group-underwriting insurances companies, which look upon the voluntary medical and hospitalization plans with strong disfavor and have taken an aggressive competitive position with respect to such plans in every community where they have been established, have with only one or two exceptions consistently refused to write surgical insurance for wives and children of employed males *at any premium rate,* in spite of large volume premium losses suffered because of their failure to compete in this field.

The only limits of consequence in the surgical plan offered by Michigan Medical Service are (1) the $15 yearly limit on diagnostic x-ray service, and (2) a limit of $150 which applies "in cases where two or more surgical services are performed at any one time or during any one continuous period of disability due to the same or related cause or causes." While the $15 x-ray limit undoubtedly protects the plan from excessive billing for this type of service in thousands of cases, the fact that even a limited amount of this service is given freely *for diagnostic purposes* would appear to invite abuse, since the benefit must be allowed for every trivial or minor illness, suspected illness or even for examination in the absence of

illness, provided only that the patient be admitted to a hospital! Similarly, the total service limitation fails to protect against the subscriber who may seek service for a succession of unrelated elective conditions. Moreover, the plan is liable for certain operative procedures, such as cystoscopy, proctoscopy, broncoscopy, biopsy, etc., which may in any instance be diagnostic rather than therapeutic in character and thus initiated in whole or in part by the physician and his patient rather than by the *circumstance of illness,* which is the insurable risk.

(2) *Emphasis on promotion in the operation of the plan.*

There can be no doubt that the Michigan Medical Service and its affiliated organization, Michigan Hospital Service, have been enormously successful from the standpoint of enrollments. A substantial proportion of the employed population of the state is now protected with the most complete form of health insurance that is available anywhere—a major accomplishment in the public interest, judged by any standard. The promotion techniques which are largely responsible for this accomplishment have without question been brilliantly conceived and capably carried out. The Michigan services have been outstandingly successful among similar organizations in developing and perfecting effective methods of cooperating with managments, labor organizations, employes' associations, civic groups and the general public.

Yet there are indications that these methods, successful as they may have been in accomplishing the first objective, large enrollments, have not been wholly an advantage to the plan. Speaking of the enrollment of employees of the Ford Motor Company in February 1940, first group to be offered the combined hospitalization and surgical benefit, an official of Michigan Hospital Service stated that the tentative surgical plan approved by the Michigan Medical Society was whipped into final shape for offering to the company at a combined rate of $1.00 per month per employee in a period of seven days, to meet a competitive offer to the company from an insurance company. The impression that final rate and benefit schedules were designed more largely to meet the market than to conform to safe insurance practice has its parallel in other circumstances: Originally, the surgical plan provided for the exclusion of benefits for hernia, appendicitis with previously existing history and certain other established conditions; these exclusions were eliminated when it was found that they were responsible for resistance to immediate acceptance of the plan by employed groups. For nearly two years, it was the practice of the plan to offer a period of free service as an inducement to the prospective applicant. Inquiries to plan officials as to the cost in claim payments of this feature elicited only the vague response that it was "very worth while" in that it helped vastly to improve enrollment percentages. This practice was discontinued on December 1, 1941.

In fairness to the managements of Michigan Medical Service and Michigan Hospital Service, it should be pointed out that high percentage enrollments do in themselves have a value in protecting the insurer, since they improve the total quality of the group risk through the inclusion of the maximum number of average individual risks. Moreover, it is arguable that a threat to private medicine and voluntary hospitals exists in the form of government intervention, and that volume participation in voluntary health insurance plans is the best means of seeking to make certain that the threat will not become a reality.

The experience to date of Michigan Medical Service appears to indicate that volume enrollments, at least in the present instance, do not provide sufficient improvement of the group risks underwritten completely to avoid financial difficulty. While it is unlikely that any difficulty exists in the Michgan Medical Service which cannot be adjusted to the ultimate satisfaction of enrolled subscribers and participating physicians, the presence even of temporary financial embarrassment or operating difficulty to the indicated degree weakens to the vanishing point the argument that volume enrollment is the best answer to government intervention. The precise and calamitous opposite is a possibility which demands consideration.

(b) *California Physicians' Service*

This service was organized in 1939 after several years of study by the California Medical Association, which provided initial working capital to the amount of $27,000. Over 5,000 participating physicians guarantee the services and accept payment on the "unit" system, under which each service performed by the physician has a scheduled value in units (Example: four weeks' care for fracture of the clavicle, 30 units; amputation of finger, 6 units), and funds available for payments to physicians are distributed each month according to the number of units of service rendered by each physician. Value of the units during the first thirteen months of operation ranged from $1.25 to $1.75.

Rates are slightly higher than in the case of Michigan Medical Service, for a generally similar benefit, with the exception that the cost of the first two visits in each disability are deductible, a waiting period of one year is required before service for operative treatment of hernia, tonsils and adenoids or nasal septum will be allowed, a waiting period of two years is required for obstetric care, and *treatment of conditions manifesting themselves before membership is permanently disallowed.*

Under the unit system of reimbursement, there can never be any question of the solvency of the corporation; 100 per cent of available funds is always paid out. The only measure of the plan's success is the acceptability to physicians of the value of the units. While the plan has been in operation too short a time to pass judgement on its ultimate success, and since only some 35,000 members have been enrolled throughout a state with a population in excess of 7,000,000, nothing appears in current reports to indicate that it

will not go forward. Restriction of any membership privilege to families with annual incomes of less than $3,000 will tend to make the value of the units more acceptable to physicians than it would be without any such restriction.

(c) *Medical Service Association of Pennsylvania*

After only fifteen months of operation and with a total membership of 7,163 at January 1, 1942, this association is carrying a deficit in the form of accounts payable to physicians accruing from several months of operation in which units of service carrying a nominal value of $2.00 were paid at $1.00 or $0.80. Only 226 physicians are participating; a current report in the Pennsylvania Medical Journal explains that no attempt is made to obtain registration of physicians until subscribers in a new territory are enrolled. Since the experience is too limited to be of value, details of rate and benefit schedules are omitted from this report.

The experience of the state-wide* medical plans in Michigan, California and Pennsylvania to date points only to the same conclusion that was reached by the Illinois State Medical Society some time ago: namely, that existing plans are still in the nature of an experiment and that any new plan launched at this time, while it can expect, of course, to profit by the experience of those already in operation, must be prepared to face the same problems without any thought that a formula for their solution has been found. At this particular time, additional problems arising out of the war and accompanying economic adjustments might complicate the operation of any such plan.

Negative indications based on the experience of existing state-wide plans, however, do not with finality demonstrate that such plans are impractical. The rapid growth of Michigan Medical Service has been perhaps the plan's worst enemy; its continued operation in the fact of the difficulties described may be considered evidence of an underlying sturdiness which is likely to prevail. California Physicians' Service and the Medical Service Association of Pennsylvania are "going concerns," there is no indication that they will not continue their steady growth. The Medical Expense Fund of New York, Inc., embracing seventeen counties in New York City area, has gone forward with the preliminary enrollment of participating physicians preparatory to public offering; state societies in Rhode Island, West Virginia, Colorado, Wisconsin, Massachusetts, Ohio, Missouri and Arizona have plans in various stages of preparation. Success of Medical and Surgical Care, Inc., of Utica, N. Y., embracing fifteen counties and sponsored by the medical societies of those counties, is encouraging to proponents of the plans: after two years of operation, this plan has paid 100 cents on the dollar for every service rendered and reported, and earned a surplus which is not inconsiderable in view of the relatively small enrollment numerically (11,000). The plan cooperates with the approved hospitalization plan on the enrollment of subscribers and in billing and accounting operations.

Should the membership of the Illinois State Medical Society at any time wish to entertain a proposal for an undertaking such as those described here, cooperation will be available through existing plans and through the approved hospitalization plans already established within the state. The Plan for Hospital Care of Chicago has already undertaken extensive studies of its own hospitalization experience with a view to determining possible rate and benefit schedules for a surgical plan. This organization reports wide evidence of public demand for such a service in the area it is serving; it is believed that a majority of the 375,000 subscribers to Plan for Hospital Care would respond favorably to any such offering if the local or state medical society were disposed to go forward in any such enterprise.

The question for physicians of Illinois to decide is no "Is there a demand for a medical plan in our state?" The demand can be demonstrated. The question is "Can such a plan be made to work?" In spite of numerous difficulties, such plans *are* operating

A further study will have to be made to determine the financial soundness of such plans, and to what degree they further the distribution of efficient medical care.

SUMMARY:

1. Group hospitalization has demonstrated its capacity to function for a better distribution and more efficient service for medical care. Physicians should encourage the growth of group hospitalization plans.

2. The House of Delegates should seriously consider the proposed legislation under the Social Security Act for compulsory hospitalization. While it is true that this is in the form of a cash indemnity, the main objection is that it is compulsory and sets-up the possible beginning for compulsory health insurance.

3. Prepayment medical plans should continue to receive our study and interest.

Respectfully submitted,
R. K. PACKARD, M. D.,
Chairman,
E. P. COLEMAN, M. D.
RALPH P. PEAIRS, M. D.
H. M. CAMP, M. D.
CHARLES H. PHIFER, M. D.
G. C. OTRICH, M. D.
C. B. RIPLEY, M. D.
C. E. WILKINSON, M. D.
W. M. HARTMAN, M. D.
E. S. HAMILTON, M. D.

*Several medical service plans sponsored by county medical societies or groups of county societies are in operation, in addition to the state-wide organizations. Such plans with headquarters at Utica and Buffalo, N. Y. are operating in conjunction with the approved hospitalization plans of those areas, with succesful enrollments and apparent satisfaction, on the whole, to physicians.

REPORT OF VETERANS' SERVICE COMMITTEE

To The Members of The House of Delegates:

The Veterans Service Committee lives in the past only as it may furnish inspiration to handle the job ahead of us. This Committee is eager, willing, and ready to cooperate in enlisting the necessary personnel to adequately fulfill the obligation of organized medicine from the State of Illinois.

In the days that lie ahead, the scope of this Committee must of necessity be enlarged to make it truly a Service Committee.

Respectfully submitted,
P. R. BLODGETT, M. D.,
Chairman.
F. O. FREDRICKSON, M. D.
T. B. WILLIAMSON, M. D.
W. C. BURKETT, M. D.
T. B. KNOX, M. D.
F. GARM NORBURY, M. D.
RALPH P. PEAIRS, M. D.

REPORT OF MATERNAL WELFARE COMMITTEE

To The Members of The House of Delegates:

On presenting the fifth annual report of the Committee on Maternal Welfare of the Illinois State Medical Society, it seems advisable to breifly tell of the organization and the work that has been done in the past year. The following physicians were selected by the various Councilors to constitute the Committee on Maternal Welfare of the Illinois State Medical Society for 1941:

Dist.	*Committee Member*	*Councilor*
1st	A. B. Owen, Rockford	Hughes
2nd	J. T. O'Neill, Ottawa	Cook
3rd	Cook County	
4th	Worling R. Young, Geneseo	Coleman
5th	R. Lynn Ijams, Atlanta	Peairs
6th	Milton E. Bitter, Quincy	Knox
7th	W. J. Gillesby, Effingham	Neece
8th	Earl D. Wise, Champaign	Wilkinson
9th	T. B. Williamson, Mt. Vernon	Hall
10th	W. S. Scrivner, East St. Louis	Otrich
11th	John F. Carey, Joliet	Hamilton

This Committee has met three times this year to discuss the program and plans to carry out the work of the Committee in their respective districts. The meetings have been well attended and much interest manifested by all the members of the Committee. The following program was definitely worked out by a sub-committee for the guidance of the county chairmen and the material welfare committees of each county in the State.

1. More emphasis should be placed on adequate prenatal care:
   a. Monthly visits up to the seventh month then every two weeks—history—physical examination, including pelvic measurements—weight and dietary instructions. Laboratory work, including red, white and hemoglobin, should be done, preferably on the first visit.
2. We recommend that each county medical society appoint a Maternal and Child Welfare Committee whose duties should consist of:
   a. Investigate maternal, fetal and early infant deaths for constructive study in reducing mortality. Postmortems on neonatal deaths should be encouraged. This investigation to be carried out by the county chairman and other physicians appointed by the local medical society; all information pertaining to this study to be kept in the hands of the medical profession.
   b. Have an adequate number of programs on maternal and pediatric subjects before local society and hospital groups to meet the need of that community.
   c. Encourage the educational program among the nurses of the community by such means as moving pictures and special lectures and special invitations should be rendered to attend obstetrical and pediatric programs before medical groups.
   d. Encourage any improvement of local hopsital factities for better maternal care.
3. We suggest that the Chairman of the Maternal Welfare Committee be designated as the county chairman and be responsible for the furthering of this program in his respective county with the cooperation of the local medical society. We suggest that he appoint a permanent Maternal Welfare Committee composed of professional and lay groups of men and women to further the program of lay education.
4. Encourage post-graduate work and refresher courses among the physicians.
5. We recommend consultations in all obstetrical complications.
6. Encourage programs on Maternal Welfare before hospital staffs.
7. We recommend that physicians stress the danger of abortions.

In the January meeting there was much discussion about the major problems of the Committe and the Chairman was instructed, by the Committee, to select six of our major problems and send them out to the county chairmen throughout the State to be submitted to the County Medical Societies for their consideration and cooperation. These problems were as follows:

1. Indiscriminate use of pituitary extract during labor.

2. Insufficient prenatal care.

3. Insufficient number of consultations in obstetrical complications.

4. Failure to examine newborn infants.

5. Do you believe operative obstetrics is adequately controlled in your county? If not, why not?

6. Would it be possible to set up rules for obstetrical consultations in the hospital in your county?

The Committee held a meeting in Springfield on September 25, 1941 and invited all of the county chairmen to attend. There was a very good attendance at this meeting and a very interesting program put on by the members of the State Committee, which was enjoyed by all present. Preceding this luncheon and program, was a broadcast over a Springfield station on prenatal care. The program, for the broadcast, was in the form of a round table discussion. Those participating were Dr. Frederick H. Falls of Chicago, Chairman of the Governor's Advisory Committee, Dr. Howard L. Penning of the Department of Public Health, and Dr. T. B. Williamson. We feel that this kind of program is a fine way in which to reach the public and bring home to them the importance of proper prenatal care.

Your Committee feels that much good has been accomplished during the past five years. There has been a definite decline in mortality of mothers and babies. While the Committee has not been so active this year, due to war conditions, the results of its labor are noticeable in every section of the State. We feel it highly important that the work of this Committee should be continued indefinitely.

Respectfully submitted,

T. B. WILLIAMSON, M. D.
Chairman.

JOHN F. CAREY, M. D.,
Secretary.

A. B. OWEN, M. D.
J. T. O'NEILL, M. D.
WORLING R. YOUNG, M. D.
R. LYNN IJAMS, M. D.
MILTON E. BITTER, M. D.
W. J. GILLESBY, M. D.
EARL D. WISE, M. D.
W. C. SCRIVNER, M. D.
Maternal Welfare Committee.

Dr. T. B. Williamson: The Maternal Welfare Committee will have a luncheon tomorrow at 12 o'clock, with a very good program. We would be glad to have as many as possible come to hear this interesting program.

REPORT OF FIFTY YEAR CLUB COMMITTEE

To The Members of The House of Delegates:

In January, 1938, the Council of the Illinois State Medical Society, realizing that many physicians in the state, had been practicing medicine for fifty years or more, and wishing to do them just honor, organized the Fifty Year Club. The Club is a phantom organization, without officers, dues or meetings. Those physicians, whether a member of the Society or not, who have been in the practice of medicine for fifty years or more, and are so recommended by their county society, are elibigle to membership.

County societies throughout the state have been holding special meetings to honor these "grand old men of medicine," and the State Society Committee sends a lapel button and a framed certificate of membership for presentation.

We recommend that the county medical society in which the members reside should always sponsor the meeting in which these honors are conferred, unless they combine with some adjoining county medical society.

Since the annual meeting last year in Chicago, the following changes in membership have taken place:

Chicago membership, May 1, 1941	96	
New members during past year	11	
		107
Deaths during past year		9
Total Chicago membership, April 30, '42		98
Downstate membership May 1, 1941	135	
New members during past year	13	
		148
Deaths reported during the past year	14	
Total Downstate membership, April 30, '42		134
Total membership April 30, 1942		232

It has come to my knowledge that there are a number of physicians throughout the state who are entitled to membership in the Fifty Year Club, who have not been so honored. They are men who have dropped out of practice, are not active in Society work, and have been forgotten or neglected by the officers of the Society in the county in which they live. A few others who are actively engaged in the practice of medicine do not desire this public honor for fear it will put them "on the spot" by giving publicity to their advanced age.

Whenever possible interesting highlights in the early days of medicine in Illinois are collected from these Fifty Year Club Members, and the material is filed with other interesting data in the office of the Secretary of the Illinois State Medical Society.

The Fifty Year Club was organized in January, 1938, and the first member admitted to the club was Dr. J. M. McClanahan, Kirkwood, who was graduated from the Chicago Medical School which later became Northwestern University Medical School in 1874. Dr. McClanahan died in 1941 at the age of 91. The last physician to whom a certificate has been issued is Dr. H. L. Kampen, Monmouth, Illinois.

Respectfully submitted,
ANDY HALL, M. D.,
Chairman.

C. E. WILKINSON, M. D.
T. B. KNOX, M. D.
L. J. HUGHES, M. D.

Dr. Andy Hall: Tomorrow noon there will be a luncheon for the Fifty Year Club members at the Abraham Lincoln Hotel, and we expect to have as the guest speaker, Dr. William A. Evans. We will be glad to have all the members of the Fifty Year Club, and any of you men who expect to practice for fifty years are also welcome.

REPORT OF COMMITTEE ON ARCHIVES

To the Members of the House of Delegates:

Our committee has gotten a small number of photographs and other material for the archives. These are good: but not numercially enough. History is written every day. Just now our profession is undergoing an epoch-making transformation from freedom of action to regeneration—certainly desirable for the duration of the war.

The archives are the storehouse of the "Golden Age" of medicine. Let us continue to build them up.

Respectfully submitted,

D. D. MONROE, M. D.,
Chairman.
CARL E. BLACK, M. D.
P. J. McDERMOTT, M. D.

REPORT OF COMMITTEE ON MEDICAL CARE OF PUBLIC ASSISTANCE RECIPIENTS

To the Members of the House of Delegates:

Part I. RELIEF

GENERAL STATEMENT

The care of the indigent continues to be a major problem in Illinois. The responsibility for reporting on the medical care of the various groups in the past has been vested in different committees of the Illinois State Medical Society. At the 1941 State Meeting, however, the House of Delegates authorized the creation of an Advisory Committee on Medical Care, its functions to include advisory supervision of medical care of the entire indigent group in the State.

In recent years there has been a national trend toward breaking down the entire relief load into various standardized categories. They are now classed as Public Assistance Recipients; these have been divided into Old Age Assistance, Aid to Dependent Children, The Blind, Direct Relief, and W.P.A.

The former Illinois Emergency Relief Commission, organized about 1933, was disbanded by the Illinois State Legislature in July, 1941, at which time the Legislature created the Illinois Public Aid Commission, under which is housed the recipients of public assistance in Illinois. The passing of the Social Security Act in 1935 was the first Federal measure enacted to provide a permanent program for care of dependents. This Act included three categories, Old Age Assistance, Aid to Dependent Children, and the Blind. This made it possible for states to receive Federal money to assist in caring for their load of dependents. The inability of local and state governing bodies to finance continued relief over a period of years has caused most of the states to pass enabling acts to conform with some of the provisions of the Social Security Act. It is thus the intention of a state, in passing such an enabling act, to reduce its relief load by transferring to the Federal Government part of the financial responsibility for some of its wards; e.g., those designated in its enabling acts.

The Social Security Act provides that the Federal Government will match, dollar for dollar, the money appropriated by the State for care of the indigent, *only when payment is made in cash direct to the recipient* or his legally appointed guardian. The Federal Government will *not* match funds paid by the Department of Public Welfare to anyone other than recipients or their legally appointed guardians.

Your Committee has made a very careful study of the many changes in the various laws governing administrative programs for the welfare of each individual group of public assistance recipients. In submitting this report we have divided it into two parts, one pertaining to Relief and the other to Social Security Recipients. We have likewise discussed the problems as they pertain to Downstate and to Chicago.

Statistics indicate that at this time Illinois has the lowest number of relief clients since the beginning of the depression. This can be accounted for by—

1. Employment, by reason of participation in the defense program; this has removed many people from dependent groups.

2. The transfer of the entire Old Age Assistance group from direct relief to Social Security benefits; also those included in Aid to Dependent Children.

3. The W.P.A. group, by reason of the defense program, has also been greatly reduced in number. It should be borne in mind that, because of the low income of this group, they have never been able to pay for medical care. It has thus been necessary for them to use county doctors, or, in some instances, to receive supplementary funds for medical care from relief agencies. They constitute a distinct and separate group among these recipients.

DOWNSTATE

In the work of your Committee during the past year, it was our endeavor to obtain as much information as possible on the situation with reference to medical care of relief clients in Downstate districts. To this end we have sent several questionnaires to each County Medical Society and have tried to ascertain through them some pertinent facts covering medical care of relief clients in each county.

It should be remembered that in 1936 the Legislature of the State of Illinois transferred the responsibility of relief from individual counties to local governmental supervision, which means in numbers, 1,437 townships, 17 commission forms of government, and one

municipility (Chicago)—a total of 1,455 local governmental units administering relief in the State of Illinois.

A review of the relief load as of January 1, 1942, shows that there were, in the Downstate area, approximately 102,000 persons receiving home relief care. It is our information that as of May 1, 1942, relief rolls in the State of Illinois will be closed to all present relief beneficiaries. It will then be necessary for each one to re-apply for relief and certify the reason for dependency.

In our study of the relief problem during the past year we have made a careful analysis of the channels through which medical care is administered. We have indicated on the following map where clients have a free choice of physicians and where medical care is furnished under other conditions. The Committee regrets that there still remain a few sections in the State where relief clients do not have a free choice of physicians.

CHICAGO

The Advisory Committee of the Chicago Medical Society on the Medical Care of the Indigent and Recipients of Unemployment Relief submits to the House of Delegates the following report on medical care of clients of the Chicago Relief Administration, from May 1, 1941, to April 30, 1942.

The Committee has, throughout the year, held meetings every two weeks with representatives of the Chicago Relief Administration, at which time problems pertaining to the medical care of relief clients were disscused. The personnel of this Committee has not changed in many years, and this fact has no doubt contributed in great measure to the outstanding success of the program in Chicago. The successful administration of any program of this type requires not only a broad understanding of the medical needs of relief clients and the laws covering the administration of such a program, but also a complete understanding of the responsibility of the administering agency. This cannot be attained if the personnel of the Committee is not familiar with all phases of the policies and laws under which medical care is to be administered to this group.

It is to be noted that when problems have arisen which dealt with certain branches of medicine upon which your Committee felt it inadvisable to make a decision, we have sought the advice and counsel of men specializing in these particular lines. This policy has also guided our action in the drug problem. A carefully selected committee from the Chicago Retail Druggists' Association has helped to develop a new drug program and establish better control and simplification of procedures. The newly drafted drug program was discussed in the report submitted to you a year ago. It has now been in operation for a year, and it is of interest to note that because of educational measures, as well as close supervision of prescriptions, only U. S. P. & N. F. drugs are now prescribed as a rule. This has aided materially in reduction of the cost of drugs. Carefully collected statistics at this time indicate that the average drug cost per physician's visit in Chicago is now about 65 cents. The number of physicians who do not conform to the average is very few. This indicates the extent to which we have obtained the co-operation of the physicians participating in the program.

We believe that these results have helped make the program a credit to the Committee and to the members of the Medical Profession, as well as to the Chicago Relief Administration.

During the period from April, 1941, to March, 1942, 1821 authorizations have been issued for obstetrical service. Approximately 50 per cent of these were for hospital delivery; 150 were deliveries in the home by private physicians, and 625 cases were delivered by one of the organized home delivery services—the Chicago Maternity Service, the Presbyterian Hospital Home Delivery Service, and the Chicago Lying-in Home Delivery Service.

In all the years in which the program has been in operation in Chicago, the matter of care of the convalescent and chronically ill has always been a major problem. In 1941, the responsibility of the administration of this phase of medical care was placed upon the Chicago Relief Administration. We hope that satisfactory standards to improve chronic and convalescent medical care will be developed. This is beyond doubt a greatly needed type of nursing and medical care that is difficult to supply. The details of administration have not as yet been completed. Inasmuch as it is a wide departure from the established facilities offered in Chicago, it embraces a broad field which has not heretofore been properly supervised.

Statistics indicate that there were about 130,000 people in Chicago certified for relief as of January 1, 1942. This is the lowest caseload in the history of the Chicago Relief Administration. The reduction is due to (1) employment under the defense program, and (2) the transfer of 47,401 Old Age Assistance cases and 13,575 Aid to Dependent Children cases to the benefits of the Social Security Act.

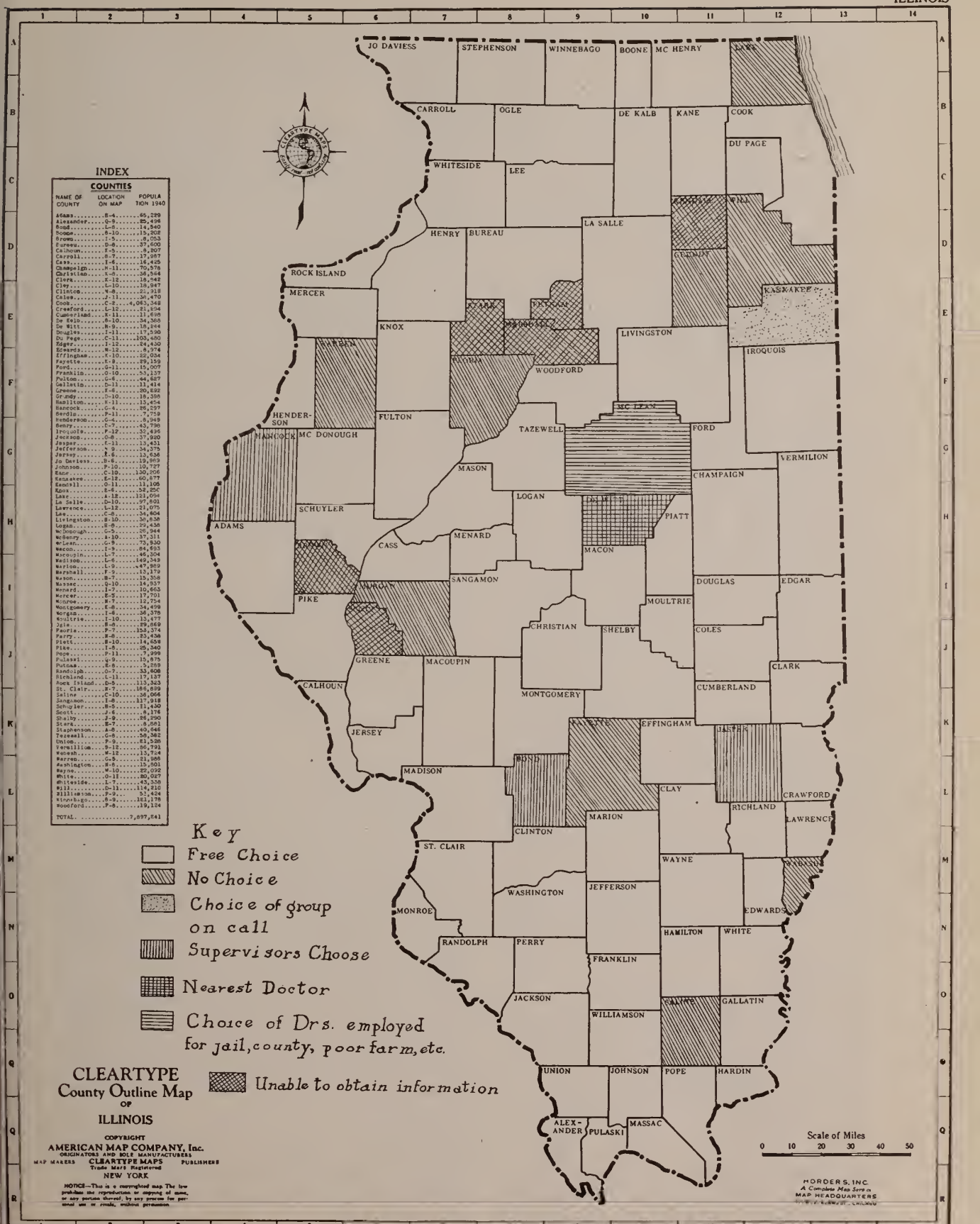
It has been necessary, since Octoger 1, 1941, for the Chicago Relief Association to grant financial assistance to 7,505 Aid to Dependent Children on the rolls of the Department of Public Welfare, because the grant was inadequate to furnish them the necessities of life. It will be seen by this that approximately 85 per cent of this group in Chicago have had to receive supplementary aid from the Chicago Relief Administration as well as from other relief agencies in outlying areas.

The number of physicians on the Chicago roster has been reduced materially during the past year, largely because of physicians entering military service.

It should be noted that since the inauguration of the program, there has been paid to physicians for medical service to relief clients the sum of $3,284,636.95.

In concluding this report we wish to extend the thanks of the Committee to Mr. Leo M. Lyons and Mr. G. J. Klupar, Administrators of Relief; to Miss Edna Nicholson and Miss Alice Saar, the Directors of Medical Relief service, and their assistants. We

MAP NO. 511
ILLINOIS



INDEX

COUNTIES

NAME OF COUNTY	LOCATION ON MAP	POPULATION 1940
Adams	B-4	65,289
Alexander	Q-5	15,498
Bond	L-6	14,540
Boone	B-10	15,202
Brown	I-5	8,053
Bureau	D-6	37,600
Calhoun	F-5	8,207
Carroll	B-7	17,987
Cass	I-6	16,425
Champaign	H-11	70,576
Christian	K-8	36,564
Clark	K-12	18,942
Clay	L-10	18,947
Clinton	N-8	21,918
Coles	J-11	36,470
Cook	C-2	4,063,342
Crawford	L-12	21,654
Cumberland	K-11	11,698
De Kalb	B-10	34,368
De Witt	H-9	16,244
Douglas	I-11	17,590
Du Page	C-11	100,480
Edgar	I-12	24,430
Edwards	N-12	6,974
Effingham	K-10	22,034
Fayette	K-8	29,159
Ford	G-11	15,007
Franklin	O-10	53,137
Fulton	G-6	44,627
Gallatin	D-11	11,414
Greene	E-6	20,822
Grundy	G-10	18,386
Hamilton	K-11	13,454
Hancock	G-4	28,297
Hardin	P-11	7,759
Henderson	G-4	8,948
Henry	C-7	43,796
Iroquois	P-12	32,496
Jackson	C-8	37,920
Jasper	I-11	13,431
Jefferson	N-9	34,375
Jersey	E-6	13,636
Jo Daviess	B-6	19,969
Johnson	P-10	10,727
Kane	C-10	130,206
Kankakee	E-12	60,877
Kendall	O-11	11,105
Knox	E-6	52,254
Lake	A-12	158,694
La Salle	D-10	97,801
Lawrence	L-12	21,075
Lee	C-8	34,804
Livingston	B-10	30,838
Logan	E-8	29,436
McDonough	G-5	26,944
McHenry	A-10	37,311
McLean	G-9	73,830
Macon	I-9	84,603
Macoupin	L-7	46,304
Madison	L-6	149,343
Marion	L-9	47,969
Marshall	F-9	13,179
Mason	B-7	15,358
Massac	Q-10	14,937
Menard	I-7	10,663
Mercer	E-5	17,701
Monroe	N-7	12,754
Montgomery	K-8	34,499
Morgan	I-6	36,378
Moultrie	I-10	13,477
Ogle	B-8	29,869
Peoria	P-7	158,374
Perry	R-8	23,436
Piatt	B-10	14,658
Pike	I-5	25,340
Pope	P-11	7,999
Pulaski	Q-9	15,875
Putnam	E-8	5,289
Randolph	O-7	33,608
Richland	L-11	17,137
Rock Island	D-5	113,363
St. Clair	R-7	186,899
Saline	J-10	26,066
Sangamon	I-8	117,918
Schuyler	B-5	11,440
Scott	J-6	8,176
Shelby	J-9	26,290
Stark	B-7	8,681
Stephenson	A-8	40,646
Tazewell	G-8	79,382
Union	P-9	21,528
Vermilion	B-12	36,791
Wabash	W-12	13,724
Warren	G-5	21,988
Washington	R-8	15,501
Wayne	W-10	22,092
White	O-11	20,027
Whiteside	L-7	43,338
Will	D-11	114,211
Williamson	P-9	52,424
Winnebago	B-9	183,178
Woodford	P-8	19,124
TOTAL		7,897,241

Key

- Free Choice
- No Choice
- Choice of group on call
- Supervisors Choose
- Nearest Doctor
- Choice of Drs. employed for jail, county, poor farm, etc.
- Unable to obtain information

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are most grateful to the physicians who have participated in the program, for their valuable co-operation and services in the care of the needy in this community.

Respectfully submitted,
JULIUS H. HESS, M. D.
JAMES H. HUTTON, M. D.
FRED H. MULLER, M. D.
GEORGE W. POST, M. D.
H. P. SAUNDERS, M. D.
CHARLES H. PHIFER, M. D.
Chairman.

PART II. SOCIAL SECURITY CLIENTS

A. CHICAGO MEDICAL ADVISORY COMMITTEE ON PUBLIC ASSISTANCE.

This Committee was appointed in August, 1941, to assume the responsibility of advising and directing the Cook County Bureau of Public Welfare in problems pertaining to medical care of Social Security beneficiaries in this County. This new program involves many questions regarding medical policy which had not been encountered in the medical program of direct relief.

To date, 52,215 cases for Old Age Assistance have been approved in Cook County.

The first major problem to come before Committee was the question of review applications for Aid to Dependent Children in Cook County, wherein the physical or mental incapacity of the parent was given as a reason for such application. The majority of applications were from persons currently receiving aid from the Chicago Relief Administration. The question to be decided was whether physical examinations were necessary to determine incapacity, so that this group might benefit from Aid to Dependent Children grants. In many cases, parents were confined in state institutions, and such applications should automatically be approved. In the majority of cases, however, the necessity for physical examinations soon became very apparent upon review of the case histories, and it was the opinion of the Committee that such examinations should be made by a group of private physicians rather than through the facilities of the clinics where many had previously been examined. Therefore, a roster of 230 physicans was appointed to complete these examinations. The results are herewith tabulated:

Total number of cases referred	902
Total number disposed of	821
Eligible because of physical or mental incapacity	680
Permanently incapacitated	535
Temporarily incapacitated	145
Not eligible on basis of physical or mental incapacity	141
Not incapacitated	123
Others	18
Total pending disposition as of March 31, 1942	81

It is the impression of the Committee that there must be developed in connection with this program a rehabilitation program for those temporarily incapacitated, so that those parents may be restored to health and qualify for employment; also that provisions should be made whereby people capable of any degree of employment may secure work for which they are fitted.

Legislation for this program was developed to take care of those lawfully entitled to its benefits. Malingerers should be weeded out. It should not be possible for those slightly incapacitated to remain as permanent beneficiaries.

In our review of cases submitted by the Bureau of Public Welfare we have found many camparatively young parents. It is to be noted that, if these people are once qualified for this type of assistance, they may draw awards until the youngest child reaches the age of 18. The Committee therefore considers that a system of periodic examinations must be set up as part of the program, for re-determination of physical or mental incapacity.

Your Committee believes that this program will require very careful supervision by members of the medical profession if the lawfully entitled recipient is to receive awards, and if the interests of the physician as well as public funds are to be protected. In this work in Cook County we have already had most gratifying co-operation from the physicians now participating, as well as the representatives of the Bureau of Public Welfare.

Respectfully submitted,
JULIUS H. HESS, M. D.
FRED H. MULLER, M. D.
GEORGE W. POST, M. D.
H. P. SAUNDERS, M. D.
CHARLES H. PHIFER, M. D.
Chairman.

B. MEDICAL PROGRAM FOR SOCIAL SECURITY BENEFICIARIES.

The Social Security Act, passed in 1935, was the first national enactment of a program for permanent care of dependent groups. Among other things, it provided for three categories; Old Age Assistance, Aid to Dependent Children, and the Blind. It was the objective of the Social Security Act to remove these groups from almshouses, poor farms, and institutions, and to provide them with the necessities of life, namely, housing, clothing and food.

The Social Security Act stipulated that any state that desired to participate in Federal funds for care of people in these groups should pass an enabling act that conformed with the wording of the Social Security Act, but had to be approved by the Social Security Board before being submitted to the State Legislature.

Inasmuch as it was mandatory for states to pass enabling acts to comply with the categories of the Social Security Act in which they wished to participate, it should be stated that Illinois has passed two such enabling acts:

1. The Old Age Assistance Act, which was approved June 29, 1935, and later amended, January 3, 1936.

2. The Aid to Dependent Children Act, which became a law on June 30, 1941, and became administrative in October, 1941.

The Aid to Dependent Children program was designed to provide for those dependent children who are deprived of parental support or care. No adult allowances are made under this program. At the time this Act was discussed in the House of Delegates last year, the proposed bill was in the Legislature.

Since October, 1941, under this law there have been qualified in Illinois 21,813 families whose total children population is over 50,000 children ranging in age from infancy to 18 years. The average monthly payment per family was $32.50; the average payment per child was $14.37.

Under the Mothers' Pension program, in the last month of its operation (September, 1941), no payments were being made in 5 counties. In 15 counties the average payment was less than $4.00 per month per child, in 39 counties the average payment was less than $6.00 per month per child; in 62 counties the average payment was less than $8.00 per month per child.

Under the ADC program, in no county is the average payment now less than $13.00 per month per child.

The Old Age Assistance now carries more than 150,000 recipients. We should like to state here that during the year 1940 the assistance granted to this group in Illinois almost doubled the amount of money required to operate all the other Public Welfare departments, with 55,000 in institutions and 12 divisions of other services of the Department of Public Welfare in Illinois. We would like to call attention to the fact that in 1941, more than $5,000,000 was paid for medical care for this group.

We must remember that the laws governing administration of any program covered by the Social Security Act are extremely rigid and inflexible. The Federal government matches dollar for dollar the amount appropriated by the State government only when payments are made in cash direct to the recipient or his legally appointed guardian. It will *not* match funds paid by the Department of Public Welfare to any one other than the recipient or his legally appointed guardian.

With the above facts in mind your Committee has, during the past eighteen months, devoted much time to careful study of the problem of formulating a program for medical care for the Old Age Assistance group and, later, the Aid to Dependent Children group.

This has included:

1. A careful analysis of the Social Security Act and the Illinois Enabling Acts which conform to the Federal Social Security Law.

2. A careful study of ways and means for drafting a satisfactory medical program within the definition and limitations of the present law.

3. A careful study of the programs of various other states covering these categories, as to procedures, administration and schedules for medical and surgical fees. We have carefully reviewed questionnaires returned by the component branches of the Illinois State Medical Society, who had been asked to express an opinion as to what might be considered by them a fair fee schedule for care of the people included in these programs.

4. We have conferred with men in special fields of medicine for details pertaining to their specialty—in ophthalmology, for example, with reference to eye care and fees for examination and glasses. In setting up a fee schedule for furnishing appliances such as trusses and braces, we have consulted with those familiar with costs of production.

5. We have had many conferences with representatives of the Department of Public Welfare regarding the contemplated change in the Social Security Act with reference to broadening its scope so that direct payment might be made to physicians for their services.

6. We have also discussed with the representatives of the Department of Public Welfare on many occasions, ways and means to facilitate payment of physicians' bills under the present law.

7. Through an agreement between this Committee and the Department of Public Welfare, the Department now mails to each recipient or his legally appointed guardian a statement to the effect that the money included in that month's payment, over and above the fixed amount of the grant, is for the purpose of paying his physician for services rendered.

8. We have given careful consideration to the necessity for supplementary legislation by the State which would make possible direct payment to the physician for medical care.

9. Inasmuch as good medical care is now universally regarded as one of the necessities of life, the Department of Public Welfare and those responsible for administration of welfare programs are seriously concerned as to ways and means for providing such medical care under the present restrictions of the law.

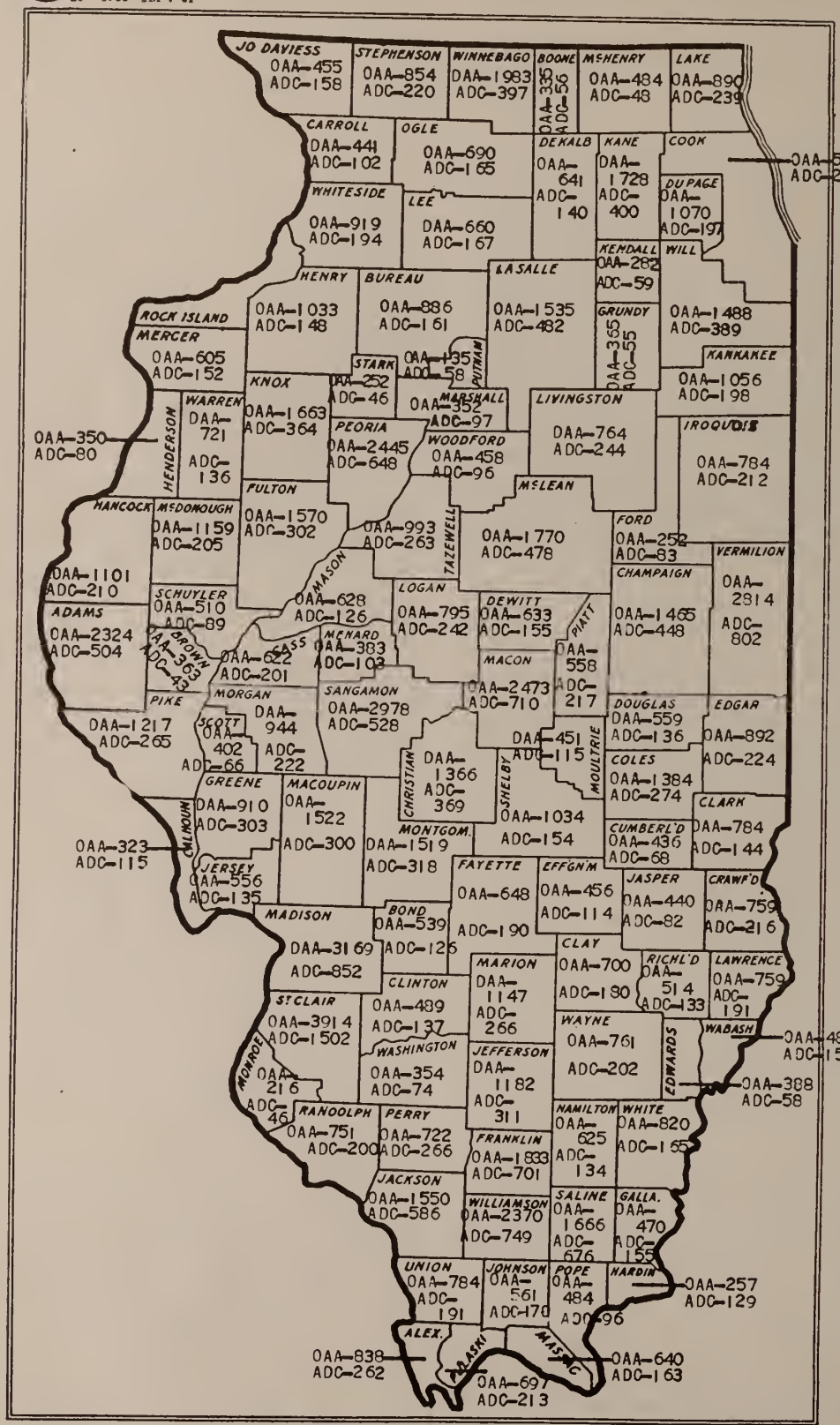
It is our information that the members of the Social Security Board and most leaders in welfare work recognize the fact that the Social Security Law should be broadened if it is to meet the objectives for which it was planned in trying to provide recipients with the necessities of life.

Attention is also directed to the fact that the selection of the type of medical care to be provided by the Department of Public Welfare is optional with the Director. He could appoint a group of salaried physicians. It is the opinion of the Committee that it is better that this privilege be extended to all physicians who wish to participate in the program, such participation to be optional with the physician.

In the question of fees, we would again repeat that the maximum award per month for Old Age Assistance is $40; that if the basic award as determined for the recipient's needs for food, clothing and shelter is $32, medical care cannot exceed $8 per month under

SOCIAL SECURITY CLIENTS, ILLINOIS, APRIL 1, 1942

26 1968 2M 7 41



OAA-- Old Age Assistance

ADC-- Aid to Dependent Children

the present law. This principle also applies to Aid for Dependent Children. We should then be reminded that so long as his award is so limited, it is impossible to collect the medical fees customarily received in private practice.

10. In formulating this program, we have asked each County to appoint an Advisory Committee on Medical Care, that they might meet with the County Department of Public Welfare to pass on problems pertaining to medical care of recipients in that county. In most counties this local Advisory Committee is now functioning.

11. We have helped to draft the manual that has been mailed to the physicians of the State, covering the program on medical care in Illinois. We have also helped to draft instructions to local representatives of the Department of Public Welfare, as well as those to the local Medical Advisory Committee. It should be recalled again that participation in the program is optional with any physician in the State of Illinois.

It should further be stated that in order for this State to comply with the Social Security Act it was necessary to change our pauper laws. Under the definition of the Social Security Act the Social Security beneficiary is not a pauper. In view of the recent changes in the pauper law in this State it is now possible, in the event of there being incurred large medical bills, bills for hospital expenses and final illness, that these bills may be approved and paid by the local administrator of relief. We are soliciting the co-operation and assistance of the County Superintendents of the Department of Public Welfare in securing approval of such bills.

We would also like to direct attention to the fact that in the event of complicated surgery or prolonged illness, additional fees may be presented to the Local Advisory Committee and by them to the State Advisory Committee for review and recommendation. It is the opinion of this Committee that medical and surgical fees, and mileage fees, in the proposed program in Illinois, are more generous than those paid by Departments of Public Welfare in other states.

It is obvious, of course, that the drafting of a medical program which must conform to the rigid legislative specifications of the Social Security Act, and still do justice to the Medical Professions, is difficult. In view of the fact that this is a national law, and that the national trend of today is for the social security load to increase rather than decrease, it is our opinion that it is better to try to help shape and direct this program now, and to endeavor to bring about necessary changes in legislation, rather than to abandon the project and thus allow it to function without the guidance of the medical profession.

It is generally conceded by the majority of people who have studied the practical application of the Social Security Act, that if it is to achieve the objectives it was designed to accomplish, supplementary legislation, either Federal or State, will be required to make the act more flexible and provide additional funds, before some of the present restrictions can be overcome.

It is stated that the Social Security Board is planning to propose amendments to Title I of the Social Security Act. These changes concerning medical care would permit direct payment by the Department of Public Welfare to a physician for medical services or supplies given to a recipient of old age assistance.

It is the recommendation of this Committee that, in the event that the Social Security Act is not broadened to permit direct payment to physicians, the members of the medical profession of this state, and the Department of Public Welfare of Illinois, should seek the assistance of the State Legislature in providing supplementary funds so that direct payment to physicians can be assured.

In order that you may know the number of people at present in each category in your County, we are submitting herewith Map #2, showing the counties in the State of Illinois with the number of Old Age Assistance and Aid to Dependent Children cases in each County.

We sincerely hope that the members of the medical profession of the State of Illinois will carefully weigh the material submitted and the work that has been accomplished; and that they will take under careful advisement the fact that Illinois now has one of the largest state case loads in the United States of each of these groups; the fact that each of these groups will continue to grow as years go on; and the possible future ramifications of the present day trend unless the program has the continued and careful guidance of the medical profession.

Respectfully submitted,
CHARLES H. PHIFER, M. D.,
Chairman.
HAROLD M. CAMP, M. D.
E. P. COLEMAN, M. D.
EDWIN S. HAMILTON, M. D.
JULIUS H. HESS, M. D.
JAMES H. HUTTON, M. D.

The President: I would like to have Dr. F. H. Muller, the Second Vice-President, take the chair while I present a supplementary report for the Advisory Committee on the Medical Care of Public Assistance Recipients.

We thoroughly appreciate that the proposed program for medical care of Social Security Beneficiaries of the State of Illinois is a controversial subject. We would like to again call your attention to the fact that programs of this type are not flexible in that they must conform to the Social Security Law, that this is a Federal Law and its actions are equally limited in all states, the only difference being that in some states the number of beneficiaries is much greater than in others. It so happens that the State of

Illinois has one of the largest case loads in the United States. This is a growing medical problem.

In order that you may realize its present scope, we would like to state that during the past year over five million dollars was spent for the medical care of these people in this state.

Your officers, members of the Council and your Committee are of the opinion that we would be derelict in our responsibility to the medical profession of this state if we did not bring this matter to your attention, as well as to try to find a solution for it. We believe that it is a subject that should be thoroughly discussed during this meeting of the House of Delegates of the Illinois State Medical Society and we sincerely hope that your final decision will be constructive. In our opinion it is a medical problem that should be supervised by the Illinois State Medical Society.

Respectively submitted,
Julius H. Hess
Edwin Hamilton
Harold Camp
James Hutton
E. P. Coleman
Charles H. Phifer, Chairman

REPORT OF INTER-PROFESSIONAL RELATIONS COMMITTEE

To the Members of the House of Delegates:

The activity of the Inter-professional Relations Committee is limited entirely to the furtherance of inter professional organization between the State Societies of Medicine, Dentistry, and Pharmacy. There were no new matters which were referred to this committee throughout the past year and no new projects undertaken.

The chairman of your committee has acted as chairman of the Organization Committee of the Interprofessional Council of medicine, dentistry, pharmacy, and nursing which was formed in the previous year by representatives from the professions indicated with the exception of nursing. The constitution developed by this committe was submitted to the State Societies of Medicine, Dentistry, and Pharmacy through their representatives and returned with such changes as each organization considered advisable. These alterations have been considered by the committee and the revised constitution is again submitted for ratification. After obtaining the approval of state organizations, it will be placed in effect.

At the several meetings of the Organization Committee matters of inter-professional significance have been discussed to the end that a more complete understanding and cooperative spirit has developed. It is contemplated that with the completion of the present organization plans, the State Nursing Association will be invited to join the Council. The invitation to the Hospital Association has been deferred awaiting a more complete classification of the program of the Council in deference to a request by the representatives of the Illinois State Dental Society.

Recommendations: (1) That the attached constitution of the Interprofessional Council be approved if considered in accordance with the constitution, by-laws, and objectives of the Illinois State Medical Society. (2) That the Illinois State Medical Society express its endorsement of and cooperation with the Interprofessional Council.

Respectfully submitted,
HAROLD J. NOYES, M. D.
Chairman.
P. E. HOPKINS, M. D.
L. J. HUGHES, M. D.
E. C. COOK, M. D.

CONSTITUTION AND BY-LAWS OF THE ILLINOIS INTER-PROFESSIONAL COUNCIL

CONSTITUTION

Article 1. The name of this organization shall be "The Inter-Professional Council of Dentistry, Medicine, Nursing and Pharmacy."

Article 2. Purpose. "The purposes of this council are: to promote the science and the art of the practice of the aforesaid professions in so far as they effect the progress, the development and the practice of the "Healing Arts" in the State of Illinois: to lend support to the program in matters of common interest shared by other health agencies in the control or the eradication of disease that endangers human life; to cooperate with state and government agencies having for their purpose the dissemination of public health information which we believe will improve hygienic standards of living in the State of Illinois."

Article 3. Council. The council shall consist of two representatives from the professions of Dentistry, Medicine, Nursing and Pharmacy, who shall be appointed by the participating organizations for a period of two years.* Each council member shall serve as a representative of his profession until his successor has been duly appointed and qualified.

Article 4. Officers. The officers of this council shall consist of a president, a vice-president, and a

*The first appointment of the representatives made after the adoption of this constitution and by-laws shall designate a member to be appointed for a term of one year and one for a term of two years in order that an alternating sequence of representatives may be affected.

secretary-treasurer elected at the first meeting following the conventions of the various organizations. The officers shall be elected by ballot for a term of one year and shall hold office until their successors have been elected and have accepted the office for which they have been chosen.

Article 5. Duties of Officers.

Sec. 1. President: The president shall preside at all meetings of this council and shall perform such other duties as regularly come within the province of that office.

Sec. 2. Vice-President: In the absence of the president, the Vice-President shall preside and shall perform all duties as regularly prescribed for the president.

Sec. 3. Secretary-Treasurer: The secretary-treasurer shall attend all meetings of the council, shall conduct the correspondence of the council, keep a record of the minutes of all meetings, collect all fees due the council from the participating organizations, and perform such other duties as pertain to the office of the secretary. He shall make an annual report to the council of all moneys received and disbursed as directed by the president.

Article 6. Meetings. The meetings of this organization shall be held annually and at such other times as the president or majority of the council may deem necessary.

Article 7. Committees. The council shall have power to establish such committees, standing and special, as are necessary for the proper conduct of the business of the council.

Article 8. Sec. 1. The state may be divided into districts as the council may deem advisable.

Sec. 2. The officers of each district organization shall consist of a president, vice-president, and a secretary-treasurer elected at the first meeting following the conventions of the participating organizations. The membership of each district shall consist of all members in good standing of the participating organizations.

Sec. 3. The officers of each district organization shall be elected by ballot for a term of one year and shall hold office until their successors have been elected and have accepted the office for which they have been chosen.

Sec. 4. Each district organization shall be governed by the constitution and may adopt by-laws which are not in conflict with this council.

Article 9. Amendments. Amendments to this constitution may be made at any regular session of the council provided that written notice of the amendment has been mailed to the executive offices of each organization represented at least 30 days prior to the date of the council meeting, and that the proposed amendments have the approval of the governing bodies of the participating groups.

BY-LAWS

1. Quorum. A quorum shall consist of a majority of the members of the Council with each of the participating organizations represented.

2. Funds. The funds of the council shall be raised by an equal appropriation from each of the participating organizations. These appropriations are subject to the approval of the executive officers of each organization. All disbursements of this fund shall be authorized by a majority vote of the Council.

3. Amendments. The amendments of the by-laws of the Inter-Professional Council may be made by a two-thirds vote of the council, provided that they have the approval of the governing bodies of each of the participating organizations.

REPORT OF COMMITTEE ON TUBERCULOSIS

To the Members of the House of Delegates:

During the 1941 session of the Illinois State Legislature a provision was enacted for a Division of Tuberculosis control in Illinois, it was thought desirable that it should become a part of the Department of Public Health of the State of Illinois.

In view of the multiplicity of the problems of tuberculosis control in Illinois, it was thought desirable when this Department was set up to generalize the long-range objectives in the control program and to set up certain specific objectives for this year. With this program in mind it became necessary to obtain a physician with adequate training in both tuberculosis and public health work to take charge. Dr. E. K. Steinkopff, formerly of the Wisconsin Tuberculosis and Public Health Association was chosen. Dr. Steinkopff has set up the following outline of specific objectives for the first year program, as follows:

1. Set up a punch card file.
2. Obtain monthly admission and discharge reports from sanatoria.
3. Cooperation with State Selective Service.
4. Revision of quarantine regulations.
5. Promotion of Glackin Law.
6. Promotional work toward obtaining sanatorium facilities in areas requiring such.
7. Education.

The purpose of setting up a punch card file is the development of accurate statistics and knowledge concerning all cases of tuberculosis reported in Illinois since 1919. There is a card file presently in existence which will be converted to the punch card system. The use of this system will permit an accurate allocation of cases and deaths. It does not seem fair to allocate deaths occurring in mental institutions to the county in which that institution appears to be located, nor does it give an accurate picture of the tuberculosis situation in that county. It also tends to lower the death rate in the county from which the patient originated. The use of the punch card system will enable a more accurate evaluation of the local problems.

Admission and discharge reports from the sanatoria will allow for a better check on reported cases and provide an index as to the proportion of positive and negative sputum cases in the sanatoria and outside the institutions in any given area. It is felt that this ratio is a good index of the effectiveness of the Tuberculosis Control Program in the area served by the sanatorium. It is expected that in return for this information this division will provide the sanatoria with monthly reports of all cases and deaths reported in the county within which the sanatorium is located.

Cooperation with Selective Service is pointed toward the end of obtaining reports of all cases of tuberculosis rejected by reason of this disease. It will provide the best and one of the largest case finding programs that can be undertaken, and the field therefore is ready made.

Quarantine regulations as presently set up can be made effective with the cooperation of local health authorities. However, in some areas this cooperation is not as effective as it might be because of doubt in the minds of the local health officers regarding their obligations. It is intended that this quarantine regulation shall be so cleared up that the local health officer will have not doubt as to his rights in the matter.

Since there are thirty-three counties not yet operating under the Glackin and Excess Tax Laws, this division hopes to take promotional steps toward the vote on this law in several of the counties this fall.

It appears, even during the short time that this division has been functioning, that certain areas of the state lack adequate sanatorium facilities, and it is intended to promote steps toward the development of these facilities in the areas requiring them.

The education program of the division includes talks to lay and professional groups, including such organizations as local tuberculosis associations and county medical societies, as well as P. T. A. organizations, etc. The development of a new pamphlet on tuberculosis for distribution to residents of the state, lectures to medical students, and informative articles in the lay and professional press, are also included.

As this Department began to function in February 1942 it has not as yet had sufficient time to carry out the many projects outlined.

It is to be hoped that the officers and members of all county medical societies will give Dr. Steinkopff and his associates hearty cooperation in promoting this worthy program.

Respectfully submitted,
ROBERT H. HAYES, M. D.

Chairman Committee on Tuberculosis
HERMON H. COLE, M. D.
FRANK J. SMEJKAL, M. D.

REPORT OF CANCER CONTROL COMMITTEE

To the Members of the House of Delegates:

I have the honor and appreciate the privilege to present to you the annual report of the Cancer Committee of the Illinois State Medical Society for the year 1941-42. It is a significant and satisfactory presage that the committee during the past year has devoted practically all its efforts in the guidance of cancer control activities as developed and executed by the various and sundry organizations throughout the State. Your committee is recognized by all such organizations as the mouthpiece of the State Medical Society and the medical profession as a whole and it is the hope of the committee that it may serve this purpose without stint and in a manner that may bring credit to the medical profession and aid to those who may be destined to suffer from the curse of cancer.

Your chairman remains a member of the Advisory Board to the Division of Cancer Control in the Department of Public Health of the State of Illinois, has accepted the position of Illinois Chairman for the American Society for the Control of Cancer and is a members of the executive Committee of the Chicago Cancer Committee, Inc. Through these contacts and others the committee is in a position to maintain a constant contact with all cancer activities throughout the state and because of the confidence established the committee through its various members is able to guide to a great degree the activities of these various organizations and to confer with and advise the officers in the performance of their duties. Such a status is conductive to a well coordinated program on cancer control and to maintain a stable and sane attitude.

General Organization. After permission granted by the Council of the Illinois State Medical Society, cancer representatives have been appointed in each of the Councillor districts. These men have served diligently and have given graciously and freely of their time and energies in preparing for local educational programs, either participating in the programs themselves or providing an able substitute. It is the hope that these men will continue in their activities and even extend their interest. Your chairman wishes especially to commend one of the members of the cancer committee, Dr. James P. Simonds, who as president elect and president of the Chicago Medical Society has done more than any previous president of the Chicago Medical Society to formulate and stimulate plans for cancer control in the Chicago area. The cancer committee of the Chicago Medical Society under the chairmanship of Dr. Simonds has been unusually active during the past year. The committee has worked with the State committee and has given invaluable aid. Members of the committee are making studies of such subjects as: radium and X-ray facilities available for the treatment of cancer; lay education; the research work being done on cancer in the various medical schools and hospitals in

the Chicago area and methods and quality of teaching of the subject to medical students and general statistical factors. The committee is extremely active, holding regular meetings and co-operating closely with the state committee and the Chicago Cancer Committee, Inc.

Following conferences with the chairman of the Educational Committee it was proposed that the State Cancer Committee be assigned the duty of providing the cancer programs both lay and professional throughout the State. With this task in mind a subcommittee on a cancer speakers bureau has been appointed with Doctor J. J. Moore of Chicago as chairman. This committee is making a survey of the entire state to enlist the services of men who are qualified and willing to participate; also plans will be perfected to establish a definite and well co-ordinated series of lectures or clinics for professional education and well chosen talks for the lay population. It is the intention to conduct the lay educational program through the organization of the Women's Field Army. In this manner there will be no duplication of effort and an intelligent supervision can be maintained at all times. Such a cancer educational program must be sympathetically assisted in its conduct by the Educational Committee, such assistance having been assured. With the establishment of cancer clinics throughout the State, the activities and scope of such an educational program may be tremendously enlarged.

The Chicago Cancer Committee, Inc.: The committee of seven appointed after the meeting of April 17th, 1941 of the delegates of some 25 organizations in the Chicago area interested in cancer control reported back to the delegates and recommended the formation of an organization similar to the New York City Cancer Committee. This recommendation was approved. By-laws were prepared and the delegates accepted these by-laws in principle. On October 14, 1941 a certificate of incorporation of the Chicago Cancer Committee was issued by the Secretary of State of Illinois. The first meeting of the incorporators of the Chicago Cancer Committee was held on October 22, 1941, at which election of members to the corporation was acted upon. The first meeting of the members of the Committee was held on October 28, 1941, at which officers and members of the Board of Directors were elected and the by-laws approved and recommended for adoption by the Board of Directors. The officers are: Dr. Ludvig Hektoen, Chairman, Alexander Ropchan, Secretary and Treasurer. The members of the Executive Committee are: Dr. Ludvig Hektoen, Dr. Bowman C. Crowell, Mrs. Arthur I. Edison, Dr. William F. Petersen, Alexander Ropchan and Dr. John A. Wolfer. These are also the members of the Board of Directors. There have been seven meetings of the Board of Directors since the incorporation of the Chicago Cancer Committee. Plans of action are under consideration and a number of committees have been appointed to carry on sundry activities. The committee has been curtailed in its activities because of financial limitations, however, it is hoped that this may be alleviated in the near future. It is the hope of the Board of Directors that the Medical Profession in the Chicago Metropolitan Area will cooperate and be of active assistance to our organization. The Chicago Cancer Committee, Inc., has been endorsed by the Council of the Illinois State Medical Society, the Council of the Chicago Medical Society and by the Board of Governors of the Institute of Medicine.

Advisory Board to the Division of Cancer Control, Department of Public Health of the State of Illinois The personnel of the board remains unchanged and its policy unaltered. During the past year the Department of Public Health has co-operated to the utmost both in action and in spirit with the desires and advice of the Board. It has continued to be of aid and assistance to the Women's Field Army in providing the film "Choose To Live" and to supply operators for its showing. It has also supplied the Women's Field Army with literature on cancer control for distribution throughout the state at lay meetings. Your committee wishes to take this opportunity to thank the Deparment of Public Health and specifically Dr. Cross, its director and Dr. Brokaw, the chief of the division on cancer control for their courteous consideration and their devotion to the ideals of the medical profession especially as applied to the cancer program outlined and approved by the board.

The preparation of the hand book on cancer is progressing slowly, the work being delayed because of other activities that could not be deferred. It is, however, making progress and it is the hope of the Board that soon much effort may be concentrated upon this project. The bill to be presented to the State Legislature by Mr. Hayne of Ottawa mentioned in our report to the House of Delegates in 1941 did not come out of Committee, therefore was not voted upon.

The board has very seriously considered the matter of tumor diagnostic services in the downstate districts. Following a plan prepared by the chief of the division of cancer control of the Department of Public Health and approved by the board four such clinics have been established. Those in operation are: Springfield Memorial Hospital, Springfield, beginning October 1, 1941, Methodist Hospital of Central Illinois, Peoria, beginning November 1, 1941, St. Anthony's Hospital at Rockford, beginning March 1, 1942, and Burnham Hospital at Champaign, beginning April 1, 1942. Plans are underway at the Ryburn Hospital at Ottawa and should be adequate soon to allow for a subsidy. Diagnostic services have been planned for DuQuoin in Perry County but because of the inability to obtain the services of a pathologist the plan has not been put into operation. The need is great there for a convenient and competent tissue diagnostic service which will serve approximately thirty of the southernmost counties of the State.

The clinics in operation and those being planned are the result of requests from the local medical societies, the clinics being established in institutions designated by the local medical societies and operated

by the local medical profession in conformity to the rules and regulations of the institutions housing the clinics and the local medical societies. The only restriction placed is that each clinic conforms to the requirements of the American College of Surgeon for approved cancer clinics. The Department of Public Health supplies a variable subsidy for each clinic to help defray the expenses of conducting the clinic such as part of the salary of the resident pathologist, secretarial and laboratory help and the like. A number of other towns and communities have asked for aid in establishing such clinics, the request always coming from the local medical profession, usually the local medical society. It is the policy of the Board and the Department of Public Health to progress slowly in order to detect any error of the present plan and to avoid such errors in the future. It is stresed that the Department of Public Health in no wise interferes with the conduct or management of the clinics, their location in a town or their personnel. The Board has been much gratified to learn that the cancer clinics are welcomed by the profession, in fact the demand has been so great that the Department of Public Health has been forced to refuse aid in many instances because of the lack of funds.

Women's Field Army. This organization has made tremendous strides during the past year, however its organization is not complete as yet. The State Commander is very cautious so that there will be no conflict with the medical profession and because of the lack of co-operation by the medical profession in some areas the work has been handicapped. This misunderstanding by the medical profession is being gradually eliminated and it is the hope of the committee that in the near future the entire medical profession will thoroughly understand the true importance of the issue and will cordially assist the Women's Field Army.

Sixty-eight meetings for lay education were arranged during the past year by the Women's Field Army. At sixty-two of these meetings the State Commander spoke outlining the aims and ambitions of the Women's Field Army and the methods employed by it in educating the public on cancer control. Forty-eight talks were given by doctors to audiences totaling over 11,000 and more than 100,000 pieces of literature were distributed. The film "Choose to Live" was shown sixty-two times to various groups besides being shown at twenty-three high schools to audiences of over 2,500 students each. This report on high schools includes only six months. The film was also shown at four colleges and four radio broadcasts were also given. Many letters have been answered requesting literature and information.

Exhibits were provided at the annual conventions of the Chicago Dental Society, Illinois Federation of Women's Clubs, Parent-Teachers Association, Tri-State Convention, Illinois State Medical Society, Beta Beta Kappa National Beauticians, National Association of Chiropodists and American Association of Railway Surgeons. The honorable mention award for educational exhibits was given to the Women's Field Army by the Illinois State Medical Society in 1941.

The Women's Field Army needs the co-operation and active assistance of every physician in the State in order to carry on an efficient campaign. It is the hope that all physicians will view the film "Choose to Live" and the new film, "Enemy X" just released and familiarize themselves with the work of the Women's Field Army by an interview with their councilor representatives. It is the belief of your committee that the work being done by the Women's Field Army is of utmost importance and that every physician should foster it and actively participate in it. Only in this way can the greatest good be accomplished.

It is obvious that great strides have been made during the past year in cancer control throughout the State. It is the unqualified opinion of your committee that this is only the beginning of greater advances that will reflect credit upon the medical profession and be of infinite value to the public. It is the ardent hope of your committee that the Illinois State Medical Society as an organization and each physician as an individual will not only endorse the program but make special efforts to assist.

The committee wishes to express its thanks to the Council of the Illinois State Medical Society for its expressions of confidence and invaluable assistance during the past year, also to Miss McArthur and the Educational Committee for their co-operation. The Chairman wishes to thank personally the individual members of the committee for their tireless and cordial assistance in carrying on the work of the committee during the past year.

Respectfully submitted,
JOHN A. WOLFER, M. D.
Chairman.
BOWMAN C. CROWELL, M. D.
ANDY HALL, M. D.
J. J. MOORE, M. D.
ROSEWELL T. PETITT, M. D.
JAMES P. SIMONDS, M. D.

REPORT OF PHYSICAL THERAPY COMMITTEE

To the Members of the House of Delegates:

The Committee on Physical Therapy has been busy studying ways in which it can best serve the needs of the society members. It has built up a potential program which it is hoped will be carried out during the next few years.

The first definite action, which may be witnessed at the annual meeting, is the introduction of Physical Therapy into the convention in the form of a scientific exhibit by the committee. The subject "Short-wave diathermy" was chosen as being one of current interest. It is the intent of the committee that an interesting scientific exhibit shall be entered each year either produced by or at the invitation of the committee.

Other activities proposed include:

1. Presentation of a paper on Physical Therapy selected and invited by the committee.

2. A survey of the practice of Physical Therapy by practitioners and hospitals in the state of Illinois.

3. Cooperation with our speakers bureau by seeking out men especially qualified to present certain subjects and engaging their willingness to address Society meetings.

4. Urge County Societies to include a Physical Therapy program in their calendar each year.

5. Offer a consulting and reference service by correspondence to the society members.

6. Conduct a Physical Therapy Column or page in the Illinois State Medical Journal, or possibly an annual Physical Therapy number such as has been done in certain other states.

The committee welcomes any suggestions or criticisms. We hope to further a program which will be valuable to a large number of physicians and thereby elevate the standard of the practice of Physical Therapy in our state.

Respectfully submitted,
MILTON G. SCHMITT, M. D.
Chairman.
ANDY HALL, M. D.
JOHN S. COULTER, M. D.
D. H. LEVINTHAL, M. D.
RUDOLPH J. MROZ, M. D.
F. FLINN, M. D.

REPORT OF VENEREAL DISEASE CONTROL COMMITTEE

To the Members of the House of Delegates:

The Division of Venereal Disease Control reports twenty-seven downstate clinics and six in Chicago. Six of the downstate clinics have been established during the past year, most of which were established under the supervision of the respective County Medical Societies. Report also shows that the number of syphilis and gonorrhea cases in these clinics during the past year are as follows:

On January 1, 1941 there were 3,716 syphilis cases under active treatment. During the year 1,978 new cases were admitted and 1,630 cases were dropped during this interval, of which 413 received a minimum amount of treatment, 87 died and 1,130 were unable to be located upon investigation—some leaving the city or state. On January 1, 1942 there were 4,026 active cases of syphilis under treatment in downstate clinics.

On January 1, 1941 there were 500 cases of gonorrhea treated in the clinics and during the year 1,006 new admissions were treated for gonorrheal infection. On January 1, 1942 there were 243 active cases of gonorrhea, which leaves a total of 753 cases discharged as cured.

The venereal disease control problem during the war period can be considered under three phases:

1. SELECTIVE SERVICE REGISTRANTS.

All venereal disease cases found among the draftees are placed under treatment by:
(a) private physician.
(b) referred to private physician by township supervisors.
(c) indigent cases are referred to free venereal disease clinics or State institutions.

2. DEFENSE AREAS.

All positive venereal disease cases are contacted for source and if found positive are referred to private physicians for treatment. Blood testing surveys are undertaken and those found positive are referred to private physicians for treatment, every effort having been made to see that their positions are retained.

3. MILITARY AND NAVAL ENCAMPMENTS.

Sources given by infected enlisted men are investigated and placed under treatment whenever possible. Repression of prostitution has been undertaken by the local legal and civil authorities with the assistance of the Federal Division of Social Protection. Taverns, saloons where defense workers and enlisted men frequent are also contacted with special reference to the control of "pick-ups". The above two measures are also employed in defense areas such as Wilmington, Crab Orchard, Rock Island-Moline, etc.

Respectfully submitted,
I. H. NEECE, M. D.
Chairman.
ANDY HALL, M. D.
JOHN S. NAGEL, M. D.

REPORT OF COMMITTEE ON INDUSTRIAL HEALTH

To the Members of the House of Delegates:

Industrial Health as well as Industrial Medicine and Surgery has become more important than ever before because of the increased production effort which Industry is putting forth to produce for VICTORY.

During the past year your Committee, has endeavored to continue the study of the needs of physicians in the state for more information concerning the care of Industrial Accidents and along the general lines of Industrial Health.

To promote better understanding of the Industrial Health problems and to disseminate information on this subject, your Committee wrote to eighty members of the State Societies; among them general practitioners, general surgeons and specialists. These doctors were chosen because of their experience and ability in Industrial Medicine and Surgery. It was our aim to interest them in presenting papers before the County Medical Societies.

Of the eighty, there were only two who did not answer the questionnaire; forty-four responded giving subjects which they feel qualified to talk upon. These names together with the subjects which were chosen are available to the General Medical Profession and more particularly to the Officers of the County Societies.

In approximately six weeks after the list of speakers and subjects was presented, nine County Societies requested the service. Your Committee feels that there will be many more such requests in the next few months.

Your Committee, furthermore, has made contacts in an effort to obtain necessary funds to carry on refresher courses in Industrial Medicine and Surgery, in various sections of the state. We are happy to report that it is our belief that of the several agencies now being contacted aid will come to us for this endeavor. A number of meetings have been held and the prospects for an immediate definite program are very encouraging.

We bespeak the interest and encouragement of the Officers of the Illinois State Medical Society, Members of the Council and Members of the House of Delegates.

Respectfully submitted,
PHILIP H. KREUSCHER, M. D.
Chairman.
FRANK P. HAMMOND, M. D.
HAROLD A. VONACHEN, M. D.

REPORT OF COMMITTEE ON CHILD HEALTH PROBLEMS

To the Members of the House of Delegates:

1. The Committee cooperated with the Committee on Mentally Handicapped Children in securing legislation to procure a Committee on Mentally Handicapped of the State Commission for Handicapped Children. This Commission is enlarging a program for all handicapped children.

2. The Committee cooperated with the Committee set up to coordinate child welfare programs in Illinois.

Respectfully submitted,
BERT I. BEVERLY, M. D.
Chairman.
ROBERT A. BLACK, M. D.
GRACE WIGHTMAN, M. D.

REPORT OF COMMITTEE ON MENTAL HEALTH

To the Members of the House of Delegates:

Since our last report all legislation pertaining to The Mentally Handicapped Child was passed in the State Legislature — and passed without one dissenting vote. This was made possible with the help of a few individual physicians and practically all the worthwhile lay organizations in the State.

With the help of the Chicago Medical Society, the President of the Board of Health, and Dr. Robert Black, a rule was passed making all cases of mentally handicapped children reportable in Chicago. This is, so far as we know, the first time this has been done in our country and we hope that this movement will soon cover our State.

Your Committee believes that, for continued success, closer contact with the laity is necessary. We all have one purpose and for progress in Mental Hygiene and for help in post-war legislation we mnst have the help of the public.

Your Committee thanks every one who has helped our work during the past year.

Respectfully submitted,
ABRAHAM LEVINSON, M. D.
BERT BEVERLY, M. D.
J. C. KRAFFT, M. D.
Chairman.

REPORT OF THE EDITOR

To the Members of the House of Delegates:

It is the desire of the editor to tell in this report what has been done during the past year in our effort to maintain the high standards of the Illinois Medical Journal. Dr. Charles J. Whalen at the time of his death in April, 1941, had been the editor since 1919, assuming this responsibility at a time when the Journal was little more than a society bulletin. Within a period of only a few years the Journal was built up into a large size periodical with 128 pages. As the Journal grew, the number of subscribers and also our own membership entitled to receive the Journal, increased, so that now some 9,000 copies are printed each month.

In the early reports of Dr. Whalen to the House of Delegates he told how many hundred thousand sheets of paper were used each year to print the Journal, and how many had been used that year than were used the previous year. At this time with our nation at war, we are interested more in the conservation of our paper stock, and we are eliminating not only unnecessary repetitions and summaries in original articles, but also limiting the bibliographic references. As an illustration, during the past six months a paper was submitted for publication with nine single-spaced sheets of typed reference to some 400 bibliographic sources used in its construction, and this alone would have required more than 75,000 sheets of Journal size paper, in addition to the lengthy paper. The paper was accepted for publication after the author had reduced its length some 40 per cent and was printed without the bibliography, as this can appear in the author's reprints.

Last June the Council, which is responsible for the publication of the Illinois Medical Journal, devoted most of one meeting to discussing future plans and policies of the Journal. It was decided that editorials would be restricted largely to discussions of scientific subjects, and that other controversial subjects would be eliminated from its columns. A highly capable Editorial Board was selected and this Board

was asked to meet at regular intervals to discuss policies in the endeavor to improve the Journal in keeping with our present times.

The Board was instructed to review all papers submitted for publication and to authorize publication of those papers which in its opinion would be of greatest interest to the readers of the Journal. Owing to the unusual conditions today, it was deemed advisable to urge authors to place a limit on the length of their papers to permit a greater number of papers and a wider variety of subjects to be presented in each issue. Another objective desired in this connection was the development of a pool of papers approved, set up and proofed by the authors so that enough papers would be on hand constantly for three or four successive issues.

The Council approved the suggestion of the Board that a new department be established in the Journal to publish regularly, interesting case reports under the heading "Clinical-Pathological Conferences." Dr. J. J. Moore was made department editor. Many complimentary letters have been received following the adoption of this feature, and this department will be continued in the Journal.

Following the outbreak of the war in December it was decided that another department, "Medicine and National Defense" be developed and published for the duration of the war to give our members the latest releases pertaining to the military and naval medical services, the wants of the government, and the most important releases from the various governmental agencies dealing with our armed forces.

Beginning with the July, 1941 issue of the Journal, color was added to the title page in the belief that it would add to the attractiveness, and would be in keeping with the times. Beginning with the January, 1942, issue, a heavier enameled cover was added and a better basic color was used. One reason for this change was the fact that the mailing envelopes formerly used had not only gone up in price, but were practically unavailable on account of war conditions. Since January the name and address of each individual on our mailing list is printed on the back cover, which has materially decreased the cost of handling the Journal each month.

For many years advertising had appeared on the front cover and with the approval of the Council, the Editorial Board and the Journal Committee, all advertising was eliminated from the cover page and the lead articles were listed, then the complete table of contents was moved opposite the first editorial page. This remains constantly in that same position so it is no longer necessary to search through the advertising pages to find the table of contents in each issue of the Journal.

It was the desire of those responsible for the publication of the Journal, to go over the list of advertisers and eliminate some objectionable "ads". This has been done. More advertisements now appear in the Journal than ever before in its history, and they are of a higher type as a result of the recently approved advertising policy.

During the year 1941 the Society lost the two men who had been responsible for the regular appearance of the Illinois Medical Journal for many years. Doctor Whalen, editor for 22 years, and Doctor H. G. Ohls, managing editor for more than 30 years, both passed away some three weeks apart.

The Council was most fortunate in procuring the services of a highly capable and experienced business manager, L. E. Malley who takes care of all advertising contracts, makes up the Journal dummy each month, and submits the copy to the printers, then sees that the authors return their corrected copy for the final make up. Your editor desires to pay a well reserved tribute to Ed Malley for the fine work he has done, and for his increasing interest in our Journal.

Instead of having several committees on publication, advertising and other special services in connection with the publication of a modern medical journal, the Council selected one Journal Committee which under the chairmanship of Dr. Percy E. Hopkins, has been of inestimable service during the past year. Dr. Hopkins has attended each meeting of the Editorial Board, has reported regularly to the Council, and has solicited constructive criticisms and suggestions which will help improve the Journal in the future.

For many years the Journal has exchanged publications with most of the leading American Medical publications as well as with many foreign journals in all parts of the world. During the past 18 months we have seen a marked change in the exchange copies coming in to the editor's desk. As the many Low Countries were over-run in the Nazi invasion, journals disappeared from the mail. Recently we have lost several excellent journals coming from the Philippines, Hong Kong, Singapore and many places in India.

The Illinois Medical Journal is the official organ of the Illinois State Medical Society published as a responsibility of the Council, and under the supervision of a highly capable Journal Committee with the assistance of a carefully selected Editorial Board. With this interesting division of responsibility and an increasing number of high type physicans assuming responsibility, the work of the editor has been made much easier than it would have been otherwise.

It is the desire of those responsible for the publication of the Journal to receive all meeting announcements, news notes and other interesting information from the 92 component county medical societies for publication. It is the hope of all that within a short time it will be possible to create a "Question and Answer" department in which information pertaining to many subjects may be published. Unusual or baffling cases with a brief case history may be presented, and the answers given by some physician selected by the editor and editorial board. Likewise controversial subjects in medicine which are of general interest may be discussed, such as the proper member of the "sulfa" group to be used in certain cases, orally or intravenously. There are many things which readers will

no doubt desire to present for such discussions, and when questions are submitted we shall be most happy to publish them with the requested replies which should be of interest to many readers.

We shall continue to carry important requests of the government which are of interest to physicians in the Journal columns during the war, and although the space will be limited each month, we shall endeavor to publish those which are of greatest importance.

During the past year it has been the policy of the editor to spend not less than seven or eight days each month at the society office at 30 North Michigan Avenue, Chicago. The quarters of the Educational Committee have been enlarged so that this has become the business office for the Illinois Medical Journal and many important conferences are now held in these rooms. Miss McArthur has been responsible for submitting data for "News of the State" and the death notices each month, these being taken from the many clippings received each week at her office.

The Journal Committee, the Editorial Board, the Council and your editor are always anxious to receive any criticisms or constructive suggestions pertaining to the Journal, in our mutual desire to improve it in every way possible. Papers on subjects of general interest are always desired and we ask on account of the shortage of paper and other materials required for publication, that the papers be as short as possible, and that extensive bibliographies or references be eliminated. The author may procure reprints in which these references can be published.

In closing this report your editor desires to thank the many groups which have spent so much time during the past year in the interest of our Journal, and state frankly that improvements which have been attempted, have been the result of the splendid cooperation which has been manifest.

Respectfully submitted,
HAROLD M. CAMP, M. D.
Editor.

REPORT OF WOMAN'S AUXILIARY

To the Members of the House of Delegates:

As president of the Woman's Auxiliary to the Illinois State Medical Society, I wish to submit the following report:

There are twenty organized units in the state. The fact that we have one Auxiliary less means only that the death of the defunct one really occurred two years when it went into a state of coma from which it never recovered consciousness, and the death was not reported until recently when all hope of revival had to be abandoned.

The total membership for the state is 1040 plus five members-at-large. Some parts of the state where the population is most sparse are not represented in Auxiliary work.

I attended the National meeting at Cleveland June 2-6, 1941, and made a report in the August number of the Illinois State Medical Journal and I reported it to the Sangamon County Auxiliary in September.

For our year's subject I have stressed particularly work on Nutrition as an element of National Defense. We have had the aid of the Illinois State Medical Association and of the State Nutritionist in making our program. I have sent to each County president an outline of the subject of Nutrition for the year's work.

The donation to the Benevolence Fund sent in by April 1, amounted to $709.00. It was voted at the State meeting on March 14th that in the future all contributions to the Benevolence Fund are to be paid with the regular dues on March 1.

Numerous public relations meetings including excellent health education programs have been provided in many counties. Cook County had a great rally for public relations in October, at which Dr. J. P. Simonds, Dr. Eben Carey and Major Lohr were the principal speakers.

Peoria County also had an outstanding public relations day April 7 in which Dr. Fred Decker (Cancer specialist) talked.

Hygeia has been placed in many schools, libraries and other public places throughout the state. In the National Hygeia Contest, Illinois ranks second among the states. In Group IV Cook County ranked second, and in Group III Vermilion won third place.

Quincy county led the volunteers of Adams County in blood donations to the American Red Cross.

Like the rest of the country that can no longer proceed with "business as usual" the Illinois Auxiliaries have been swept with the others into Defense Work. Our program on Nutrition that began bravely as a course of study had to realize itself in actual work on Nutrition by many of our members allying themselves with the State Nutrition Committee or with Red Cross classes in nutrition.

Practically all our members are enrolled in some sort of Red Cross work as students or teachers in classes for First Aid nursing and directing blood donations for military hospitals.

Some of our branches have kept up their efforts on remedial work for heart trouble, cancer, pneumonia, child and maternal welfare.

All together we have held our own identity, which in the great tide of defense work that has engulfed all organization, is all that we could hope for.

Our state meeting will be held in Springfield, Illinois, May 19-20 in conjunction with the Illinois State Medical Society.

Respectfully submitted,
MRS. HARRY OTTEN
President Woman's Auxiliary.

The President: We now come to unfinished business, and as the Secretary tells me there is none, we will pass to new business, the first item of which is the introduction of resolutions and their referral to the Resolutions Committee.

Dr. Andy Hall, Mt. Vernon: I wish to present the following resolution.

1. UNITED STATES CITIZENSHIP A REQUISITE FOR A POSITION ON THE STATE PAYROLL.

Whereas, it is generally known and conceded that Nazi, Fascists, and Communists occupying positions in the governments, universities, professions and business enterprises of Finland, Poland, Denmark, Norway, Holland, Belgium and France, contributed toward the downfall of these Democracies, and,

Whereas, evidence has been submitted by competent, accredited newspaper correspondents, by the Federal Bureau of Investigation of the Department of Justice, by the State Department of the United States, by Congressional Investigation Committees and by such confession books as "Out of the Night," by the German Communist Jan Valtin (Krebs), and by those Committees of the American Legion, that European Governments, notably those of Germany and Italy, have been and are, exercising policies to place representatives of their philosophies of government, economics and religion in key positions in the government, the schools, the professions and businesses in this country, and,

Whereas, such philosophies and the activities of those believing therein are inimicable to the best interests of the American way of life, and,

Whereas, many states of the Union have enacted laws and promulgated rules and regulations making United States citizenship essential to license in the various trades and professions, and United States citizenship a requisite to being placed on the State payrolls, and,

Whereas, in the absence of such laws and regulations in the State of Illinois has made, and is making, this state the "dumping ground" of aliens, many of whom have been placed on the State payroll, and,

Whereas, the American Legion, the organized medical, dental, pharmaceutical and other trades and professions sponsored House Bills 11 to 26, making citizenship a requisite for license to the various trades and professions in this State, and citizenship a requisite to being placed on the Illinois payroll, and,

Whereas, the bills passed the Lower House of Legislature by a vote of 107 for to 6 against, and passed the State Senate by a vote of 34 for to 11 against, and,

Whereas, there is not a state in the Union that will license a man to practice law who has not first become a citizen of the United States, yet Governor Green vetoed these bills, disregarding the advice of the various trades and professions and the overwhelming majority of both Houses of the Legislature and the American Legion, therefore,

Be it resolved, that we heartily compliment and commend the member of our Legislature who sponsored and supported these bills and we recommend that when the Legislature reconvenes, these measures be re-introduced and enacted into laws, and urge the Governor to approve same.

Dr. Harlan English, Danville: I wish to introduce the following resolution:

2. APPOINTMENT BY THE AMERICAN MEDICAL ASSOCIATION OF A LIAISON COMMITTEE TO MEET WITH AND ADVISE THE SOCIAL SECURITY BOARD IN MATTERS OF MEDICAL CARE

In view of the lack of guidance by the midical profession in the matter of medical problems connected with the Social Security Act and its Administrators, the Social Security Board,

Be it resolved, that "the Illinois delegation to the American Medical Association meeting of the House of Delegates this June be instructed to request that the American Medical Association officially appoint a Liaison Committee to meet with and advise the Social Security Board in matters of medical care and to assist in working out a nation-wide program of medical care within the framework of our present type of private medical practice."

Dr. K. B. Reeger, Freeport: This resolution is presented from the Stephenson County Medical Society.

3. MEDICAL SERVICES TO RECIPIENTS OF OLD AGE ASSISTANCE

Whereas, the Stephenson County, Illinois Medical Society, at its regular meeting held at Hotel Freeport, in the City of Freeport, Illinois, on the 23rd day of April, A. D. 1942, after due consideration and deliberation on the plan proposed by the State Department of Public Welfare, "in cooperation with the committee of

the Illinois State Medical Society," for medical services to a class of our clientele referred to as "recipients of old age assistance," made the following observations and interpretations of such plan which are respectfully submitted to this House of Delegates of the Illinois State Medical Society, at Springfield, Illinois, which are as follows, to-wit:

1. A setting up of a fee bill by the Welfare Department of the State.
2. A refusal of the Welfare Department of the State to secure the payment of a bill incurred by a recipient of its act.
3. Calling for a lowering of fee by the medical profession of the state at a time when wages and living costs are increasing.
4. The publishing of a diagnosis to members of the welfare department.
5. An intrusion in the private practice of medicine by the state.
6. The establishment of a panel system by the Welfare Department of the state.
7. The increase in clerical work of records for these old age recipients.

Now, therefore, in consideration of the premises, the Stephenson County, Illinois Medical Society has deemed it highly advisable to respectfully submit the resolution immediately following with the firm belief that the contents thereof better meet the ends of justice in that the interests of our fellow citizens and our government will be better served thereby in a just and more equitable manner.

RESOLUTION

Be it resolved; by the Stephenson County, Illinois Medical Society that the foregoing proposed plan of assistance by the Medical profession to members of the Old Age Assistance group is in many respects clearly arbitrary and unreasonable in that it clearly infringes upon the physicians' and surgeons' right to claim a reasonable compensation for the diligent and valuable service rendered by him in the preservation of health and human life which is man's most precious and treasured possession in this abbreviated life:

Be it further resolved, that conversation and diagnosis between physician and patient are under the law for the most part considered "privileged communications," the same as lawyer and client, priest and penitent, and should be given that amount of due consideration according to the Statutes made and provided.

Be it further resolved, that the medical profession of the State of Illinois be offered the same high degree of consideration as all other businesses and professions in their sincere desire to preserve health and human life and to the extent that they be reasonably rewarded for their services.

Be it further resolved that under the law the citizens of Illinois who are extended old age assistance and who are the owners of their own homes or other real estate are obligated to assign their right, title and interest to the State of Illinois for the purpose of compensating our state for the assistance received by them through old age assistance, and be it further resolved that we believe this to be fair, just and equitable and to the best interest of the State of Illinois, but in the same token, it seems to us just and reasonable compensated for the invaluable services rendered to the citizens of our great state not by a board, commission committee or welfare agency but by the physician and surgeon himself who has been licensed by the State of Illinois to diligently perform his duties and who has full and complete knowledge of the extent of his services and the grave responsibility and duty which he has been called upon to discharge.

Be it further resolved that in all old age assistance cases that the physician and surgeon be permitted to use his or her own reasonable discretion in the charge for services and that such charge be fixed at the minimum in conformity with the rules and regulations of the respective county medical associations' charges in such cases made and provided and to be uniformly followed throughout the State of Illinois.

Be it further resolved that the clerical work required of the physician and surgeon be limited to an itemized statement of the services renedered and a reasonable charge therefore and be it further resolved that the state or county assume the obligation to those receiving old age assistance or make reasonable provision for those who are unable or refuse to pay for the valuable medical treatment and surgical services rendered and that the cost of medicine to the old age assistance citizens be at the minimum charge as are defined in the by-laws of the local county medical society and

Be it further resolved that this resolution is hereby respectfully submitted with the sole purpose of promoting a better understanding between government, citizen and fellow servant in order to provide justice, equality and loyalty to all in our sincere desire to preserve the health and human life of all our fellow citizens.

This resolution was duly passed and approved on the 23rd day of April, A. D. 1942.

STEPHENSON COUNTY MEDICAL SOCIETY

Dr. George W. Post, Chicago: I wish to present the following resolution:

4. RIGHT TO PRACTICE MEDICINE BY ALIENS

Whereas, we believe that the right to practice medicine in all its branches should be restricted to citizens of the United States who have complied with the requirements of the laws of the State of Illinois,

Therefore be it resolved, that the Illinois State Medical Society be and it is hereby requested to prepare a bill for presentation to the Illinois Legislature, denying the right to practice medicine in the State of Illinois to all aliens.

This is submitted by the Resolutions Committee of the Chicago Medical Society, and was approved by the Council on May 1st, 1942.

Dr. A. H. Bitter, Quincy: I wish to present the following resolution from the Adams County Medical Society.

5. RESTRICTED OF RIGHT TO PRACTICE MEDICINE TO CITIZENS OF THE UNITED STATES WHO HAVE COMPILED WITH THE REQUIREMENTS OF THE LAWS OF THE STATE OF ILLINOIS

Whereas, we believe that the right to practice medicine in all its branches should be restricted to citizens of the United States who have complied with the requirements of the laws of the State of Illinois,

Whereas, it is the sense of the Adams County Medical Society that in view of the fact that commissions in the U. S. Army are denied to aliens graduating from Foreign Medical Colleges and Domestic Medical Colleges, of Class B type, and

Whereas, many of the younger men of our profession are being called into service of the armed forces and thereby give up their practice in civil life, and

Whereas, it is manifestly unfair that physicians who should assume the responsibility of Government service are denied this privilege, and

Whereas, these physicians are denied these commissions and will remain in the community and absorb the practice of the men in the service,

Therefore be it resolved, that the attention of the House of Delegates be called to this inequity in medical practice, and be it further

Resolved, that the House of Delegates empower a committee to present resolutions to the Illinois State Legislature requesting correction of these injustices, and further be it

Resolved, that our Delegate to the Illinois State Medical Society introduce these resolutions at the next meeting of the House of Delegates.

This resolution was unanimously adopted in regular session by the Adams County Medical Society.

Dr. William M. Larsen, Stockton: I wish to introduce the following resolution from the Jo Daviess County Medical Society.

6. RIGHT TO PRACTICE MEDICINE RESTRICTED TO CITIZENS OF THE UNITED STATES

Whereas, we believe that the right to practice medicine in all its branches should be restricted to citizens of the United States who have complied with the requirements of the laws of the State of Illinois, therefore be it and it is hereby

Resolved, that the Jo Daviess County Medical Society requests the adoption by the Illinois State Medical Society, of a by-law or regulation which will deny membership to all aliens, and be it further

Resolved, that the Illinois State Medical Society be and it is hereby requested to prepare a bill for presentation to the Illinois State Legislature, denying the right to practice medicine in the State of Illinois to all aliens, and be it further

Resolved, that this resolution be presented for adoption, to the next annual convention of the Illinois State Medical Society, and be it further

Resolved, that a copy of this resolution be sent to the Delegate of the Jo Daviess County Medical Society and that he be instructed to support the resolution.

The above resolution, on motion duly made, seconded and unanimously carried, was adopted

by the Jo Daviess County Medical Society at its regular meeting held Tuesday, April 28.

Dr. Bernard Klein, Joliet: I wish to present the following resolution which was passed by the Will-Grundy County Medical Society April 5, 1942.

7. RIGHT TO PRACTICE MEDICINE RESTRICTED TO CITIZENS OF THE UNITED STATES

We believe that the right to practice medicine in all its branches should be restricted to citizens of the United States who have complied with the requirements of the laws of the State of Illinois.

Therefore be it resolved, that the Will-Grundy County Medical Society requests the adoption by the Illinois State Medical Society, of a by-law or regulation which will deny membership to all aliens, and be it further

Resolved, that the Illinois State Medical Society be hereby requested to prepare a bill for presentation to the Illinois State Legislature, denying the right to practice medicine in the State of Illinois to all aliens, and be it further

Resolved, that a copy of this resolution be sent to the Secretaries of all County Medical Societies in the State of Illinois with a request for their support of this resolution.

Dr. D. B. Pond, Chicago: I am sure we were all impressed with the remarks of Dr. Lahey concerning securing medical personnel for this present conflict. Our President, Dr. Phifer, is also Chairman of Procurement and Assignment Division of the 6th Corps Area. The 6th Corps Area has appointed Colonel Olmstead and Major Sweeney as a committee from the Army. I thought it adivsable for this House of Delegates to go on record concerning the appointment of a committee to cooperate with this military committee. I therefore, move that the House of Delegates authorize the President to appoint a committee to be designed as the Military Committee to get military information relative to Procurement and Assignment and to assist in promoting applications for commissions among the medical profession. (Motion seconded by Dr. Ed Bechtold, Belleville, and carried.

Dr. James H. Hutton, Chicago: The Illinois Medical Journal has carried a permanent historian. Dr. Cutter, who has ooccupied that position, has taken no interest in the activities of the Society. He did not contribute to the Centennial number and has made no report this year. I move that the post of permanent historian be abolished and its place be taken by the Archives Committee. (Motion seconded by Dr. Andy Hall, Mt. Vernon).

The Secretary: This Committee on Archives consisting of Drs. D. D. Monroe, Chairman, P. J. McDermott, and Carl E. Black, was elected last year. (Motion carried).

Dr. Mather Pfeiffenberger, Alton: I move that we adjourn until nine o'clock Thursday morning. (Motion seconded by Dr. E. E. Davis, Avon, and carried.

The House adjourned at 5:35 P. M.

SECOND SESSION

Thursday Morning, May 21, 1942

The Thursday morning session was called to order at 9:42 A.M. by the President, Dr. Charles H. Phifer, Chicago.

The President: The first order of business is the report of the Credentials Committee.

Dr. E. P. Coleman, Canton: The Credentials Committee has certified 78 down state delegates, 48 from the Chicago Medical Society and 16 members of the Council, a total of 142. I move you, Mr. President, that these delegates constitute the House for this session. (Motion seconded by Dr. Frank F. Maple, Chicago, and carried.

The President: The next order of business is the roll call by the Secretary.

The Secretary: We have present today and certified 67 downstate delegates, 33 Chicago Medical Society and 14 members of the Council, a total of 114.

The President rules that this constitutes the membership of the House for this meeting.

The President: The next order of business is the reading of the minutes of the first session.

(The Secretary read the minutes)

Dr. E. S. Hamilton, Kankakee: I move that the minutes be approved as read. (Motion seconded by Dr. R. H. Hayes, Chicago, and carried).

The President: The next order of business is the election of officers. Nominations are in order for President-Elect.

Dr. Oscar Hawkinson, Chicago: On behalf of the Chicago delegation I wish to nominate one of our members who has been a good citizen and a hard worker in the Society for many years, Dr. George W. Post. (Seconded by Dr. Robert H. Hayes, Chicago).

Dr. C. E. Wilkinson, Danville: I move that the nominations be closed and the Secretary instructed to cast the affirmative ballot for Dr. Post. (Motion seconded by Dr. L. E. Day, Chicago, and carried).

The ballot was cast and the President declared Dr. Post elected.

The President: Nominations are in order for First Vice-President.

Dr. E. S. Hamilton, Kankakee: I wish to nominate Dr. Hermon H. Cole, Springfield. (Seconded by Dr. Harlan English, Danville).

Dr. Mather Pfeiffenberger, Alton: I move that the nominations be closed and the Secretary instructed to cast the affirmative ballot for Dr. Cole. (Motion seconded by Dr. C. E. Wilkinson, Danville, and carried). The ballot was cast and the President declared Dr. Cole elected.

The President: Nominations are in order for Second Vice-President.

Dr. Andy Hall, Mt. Vernon: I wish to place in nomination Dr. C. O. Lane of West Frankfort. (Seconded by Dr. E. E. Davis, Avon).

Dr. L. O. Frech, Decatur: I move that the nominations be closed and the Secretary be instructed to cast the affirmative ballot for Dr. Lane. (Motion seconded by Dr. R. H. Hayes, Chicago, and carried.)

The ballot was cast and the Chair declared Dr. Lane elected.

The President: Nominations are in order for Secretary-Treasurer.

Dr. E. P. Coleman, Canton: I would like to place in nomination the name of the best Secretary in the country, Dr. Harold M. Camp, to succeed himself. Seconded by Dr. W. E. Kittler, Rochelle).

Dr. C. E. Wilkinson, Danville: I move that the nominations be closed and the President instructed to cast the affirmative ballot for Dr. Camp. (Motion seconded by Dr. W. E. Kittler, Rochelle, and carried).

The ballot was cast and the President declared Dr. Camp elected.

The President: Nominations are in order for Councilors, the first vacancy is in the Third District, Dr. L. E. Day retiring.

Dr. R. K. Packard, Chicago: I wish to nominate Dr. L. E. Day to succeed himself. (Motion seconded by Dr. R. H. Hayes, Chicago).

Dr. C. E. Wilkinson: I move that the nominations be closed and the Secretary be instructed to cast the affirmative ballot for Dr. Day. (Motion seconded by Dr. I. H. Neece, Decatur).

The ballot was cast and the President declared Dr. Day elected.

The President: Nominations are in order for Councilor of the Sixth District, Dr. T. B. Knox retiring.

Dr. A. H. Bitter, Quincy: I would like to nominate Dr. Walter Stevenson of Quincy to succeed Dr. Knox. (Seconded by Dr. T. B. Knox, Quincy).

Dr. Mather Pfeiffenberger, Alton: I move that the nominations be closed and the Secretary be instructed to cast the affirmative ballot for Dr. Stevenson. (Motion seconded by Dr. C. E. Wilkinson, Danville, and carried).

The ballot was cast and the President declared Dr. Stevenson elected.

The President: Nominations are in order for Councilor of the Ninth District, Dr. Andy Hall retiring.

Dr. T. B. Williamson, Mt. Vernon: I wish to nominate Dr. Andy Hall to succeed himself. (Motion seconded by Dr. C. O. Lane, West Frankfort).

Dr. T. A. Bryan, Mattoon: I move that the nominations be closed and the Secretary instructed to cast the affirmative ballot for Dr. Hall. Motion seconded by Dr. E. E. Davis, Avon, and carried).

The President: Nominations are in order for Councilor of the Tenth District, Dr. G. C. Otrich retiring.

Dr. Ed Bechtold, Belleville: I would like to nominate Dr. G. C. Otrich to succeed himself. (Motion seconded by Dr. T. B. Williamson, Mt. Vernon).

Dr. T. B. Williamson, Mt. Vernon: I move that the nominations be closed and the Secretary instructed to cast the affirmative ballot for Dr. Otrich. (Motion seconded by Dr. J. S. Templeton, Pinckneyville, and carried).

The ballot was cast and the President declared Dr. Otrich elected.

The President: The next order of business is the election of Delegates to the American Medical Association for two sessions, one retiring from downstate, Dr. E. S. Hamilton, and four from Cook County, Drs. C. H. Phifer, G. Henry Mundt, R. K. Packard, and J. J. Pflock.

Dr. W. E. Kittler, Rochelle: I wish to nominate Dr. E. S. Hamilton to succeed himself. He is a credit to the House of Delegates and to the American Medical Association.

Dr. L. O. Frech, Decatur: I move that the nomination be closed and the Secretary cast the affirmative ballot for Dr. Hamilton. (Motion seconded by Dr. C. H. Hulick, Shelbyville, and carried).

The ballot was cast and the President declared Dr. Hamilton elected.

Dr. R. H. Hayes, Chicago: I would like to place in nomination the name of Dr. R. K. Packard to succeed himself.

Dr. Percy Hopkins, Chicago: I would like to place in nomination the name of Dr. G. Henry Mundt to succeed himself.

Dr. Charles Papik, Chicago: I would like to place in nomination the name of Dr. J. J. Pflock to succeed himself.

Dr. G. E. Johnson: I wish to nominate Dr. Charles H. Phifer to succeed himself.

Dr. T. B. Williamson, Mt. Vernon: I move that the nominations be closed and the Secretary cast the affirmative ballot for the nominees named. (Motion seconded by Dr. T. A. Bryan, Mattoon, and carried).

The ballot was cast and the President declared Drs. Packard, Mundt, Pflock and Phifer elected.

The President: The next order of business is the election of Alternate Delegates to the American Medical Association for two sessions, one for downstate, Dr. Mather Pfeiffenberger retiring, and four from Cook County, Drs. A. H. Geiger, George W. Post, Carl Steinhoff, and Frank L. Brown, retiring.

Dr. C. B. Ripley, Galesburg: I wish to nominate Dr. Mather Pfeiffenberger to succeed himself.

Dr. J. S. Templeton, Pinckneyville: I move that the nominations be closed and the Secretary instructed to cast the affirmative ballot for Dr. Pfeiffenberger. (Seconded by Dr. W. E. Kittler, Rochelle, and carried).

The ballot was cast and the President declared Dr. Pfeiffenberger elected.

Dr. J. H. Hutton, Chicago: I would like to nominate Dr. A. H. Geiger to succeed himself.

Dr. H. W. Muller, Chicago: I would like to nominate Dr. G. W. Post to succeed himself.

Dr. Robert Hayes, Chicago: I would like to nominate Dr. Frank L. Brown to succeed himself.

Dr. L. E. Day, Chicago: I would like to nominate Dr. D. B. Pond to succeed Dr. Steinhoff.

Dr. Warren Furey, Chicago: I move that the nominations be closed and the Secretary cast the affirmative ballot for the nominees named. (Motion seconded by Dr. F. W. Muller and carried).

The ballot was cast and the President declared Drs. Geiger, Post, Brown and Pond elected as Alternate Delegates to the American Medical Association.

The President: The next order of business is the election of Standing Committees.

(Nominations were presented in each case, the Secretary instructed to cast the affirmative ballot for the following members of the Standing Committees, and they were declared elected by the President).

Public Relations: Charles Papik, Chicago (Chairman), W. S. Bougher, Chicago, H. W. Woodruff, Joliet.

Medical Legislation (nominated by the Council and elected by the House of Delegates): Robert H. Hayes, Chicago, Mather Pfeiffenberger, Alton, Harry Otten, Springfield.

Medico-Legal: T. B. Williamson, Mt. Vernon and Oscar Hawkinson, Chicago.

Medical Education and Hospitals: J. P. Simonds, Chicago.

Medical Benevolence: H. D. Palmer, Rockford for 3 years.

The President: The next order of business is fixing of the per capita tax for 1943; it is now eight dollars.

Dr. E. S. Hamilton, Kankakee: The Council recommends that the per capita tax remain at eight dollars and I so move. (Motion seconded by Drs. R. H. Hayes, Chicago, and Harlan English, Danville, and carried).

The President: The next order of business is the selection of a meeting place for the 1943 annual meeting.

Dr. J. P. Simonds, Chicago: At the last meeting of the Council of the Chicago Medical

Society on May 1st, a resolution was passed extending a very cordial invitation to the Illinois State Medical Society to meet in Chicago in 1943. I am here to bring you the official invitation. I would like to ask the privilege of the floor for Mr. W. J. Hennessey of the Chicago Association of Commerce.

W. J. Hennessey: We of the Convention Bureau of the Chicago Association of Commerce want to supplement the invitation extended by the Chicago Medical Society. I think you had a grand convention in Chicago last year. I am not going to tell you about the facilities that Chicago has for accommodating your group, because you know from last year that we do have the facilities. I would like to tell you that when you come next year, our job will be to make you comfortable.

Dr. S. E. Munson, Springfield: I am not asking you back to Springfield. We have been extending an invitation every other year for twelve years. Last year we had a fine convention in Chicago and we are very glad they have extended this invitation to you.

Dr. J. S. Templeton, Pinckneyville: I move that we accept the invitation of Chicago. (Seconded by Drs. I. H. Neece, Decatur, and C. E. Wilkinson, Danville).

Dr. Edward H. Weld, Rockford: Two weeks ago the Winnebago County Medical Society voted to ask the Illinois State Medical Society to meet in Rockford in 1943. I am assured we have 410 rooms and that our facilities will be as good if not better than before. It is my duty and my pleasure to extend this invitation to Rockford.

The President: All in favor of the motion to go to Chicago signify by the usual sign. (Unanimously carried.)

Dr. C. E. Wilkinson, Danville: I think the motion to accept Chicago was a little premature. The nominations had not been closed and the motion of Dr. Templeton, consequently, was out of order.

Dr. L. O. Frech, Decatur: I move that the action taken concerning Chicago be rescinded, and that a vote be taken in favor of both Chicago and Rockford. Seconded by Dr. Andy Hall and carried) (76 in favor).

Dr. C. E. Wilkinson, Danville: I move that the vote on Chicago and Rockford be made a standing vote rather than a vote by ballot. (Motion seconded by Dr. L. O. Frech, Decatur, and carried).

(A standing vote was taken and Chicago was the unanimous choice).

Dr. W. E. Kittler, Rochelle: I move that the vote be made unanimous. (Motion seconded by Dr. J. W. Long, Robinson, and carried).

The President: The next order of business is the reports of Reference Committees. We will limit the discussion to five minutes, in order to get through.

COMMITTEE ON REPORTS OF OFFICERS

Presented by Dr. G. Henry Mundt, Chicago.

Report of the President: Your Committee notes the good will existing between our President and the Council and the Committees of our Society. One of our very important civilian problems today is the problem of the care of the indigent. We know the broad knowledge of our President and recommend that our Officers and the Council continue their study of this problem. We note with satisfaction the statement, "I am unalterably opposed to the socialization of medicine." With the broad knowledge of our President in view, we commend the saneness of his views on the Social Security problem. Your Committee is pleased to note the advocacy of a better system of payment of the physician for his services to the indigent and advocate a continuation of work toward this end.

Our President recommends that the Secretary be provided with an assistant; while your Committee feels that the President doubtless knows we have confidence that the Council will provide for the Secretary any assistance, which he needs, and we bespeak the confidence of the rank and file of the profession in Illinois in the Council.

It was not necessary for your Committee to read the report of the President to know the tremendous improvement in the Illinois Medical Journal and we suspect that the President had an abundant opportunity to assist in this improvement.

Your Committee recognizes the great improvement, which has been made in the functioning of the Society by the union of the Educational Committee and the Editorial office in Chicago. We are pleased to note the cordial

relationship of the Officers of our Society and the Department of Public Health of the State of Illinois spoken of by our President.

(Dr. Mundt: I move the adoption of this portion of the report. Seconded by Dr. E. E. Davis, Avon, and carried).

Report of the President-Elect: We have read with satisfaction the report of our President-Elect and note with pleasure the broad knowledge of the problems of medicine therein shown.

(Dr. Mundt: I move the adoption of this portion of the report. Motion seconded by Dr. J. W. Long, Robinson, and carried).

Report of the Secretary: Your Committee has read the report of the Secretary, which is up to its usual high standard and advocate that each member of the House of Delegates read this report with care. We note the very slight reduction in new members of our Society within the last year but feel that if it had not been for the great activity of our State and County Societies, we probably would have sustained a loss rather than an increase in members.

We note with satisfaction the activity of the Fifty Year Club. Also, we note with satisfaction the activity of the Medical Benevolence Committee and strongly advocate its continuance.

Your Committee is grieved at the passing of two past Presidents, Dr. John R. Neal and Dr. Charles Skaggs.

The Annual Audit shows our Society to be in a very satisfactory condition.

(Dr. Mundt: I move the adoption of this portion of the report. Motion seconded by Drs. Andy Hall, Mt. Vernon, and C. E. Wilkinson, Danville, and carried).

Report of the Chairman of the Council: Again we note reference to the improvement of our Journal and the steps taken to improve that Journal. Your Committee is well satisfied in this improvement. The unofficial Executive Committee spoken of by the Chairman of the Council is undoubtedly a great help at this time, when more things need to be done than time permits.

Your Committee has read the comment on medical care for public assistance recipients and has every confidence that the Council, its Chairman and the Officers of our Society will do everything possible to improve the relationship existing between our members and those in control of the service.

We are pleased that the Chairman speaks so well of the Committee on Medical Benevolence, which we note is rarely spoken of without the name of the Chairman, Dr. John Nagel.

We note the good will existing between our Society and the Department of Public Health under the Director, Dr. Roland R. Cross.

We are glad to note that the Council has abrogated the dues of men in the armed forces.

(Dr. Mundt: I move the adoption of this portion of the report. Seconded by Dr. E. E. Davis, Avon, and carried).

Respectfully submitted,

T. B. Williamson
E. E. Davis
G. Henry Mundt, Chairman

Dr. Mundt: I move the adoption of the entire report. (Motion seconded by Dr. C. E. Wilkinson, Danville, and carried).

REPORT OF COMMITTEE ON REPORTS OF COUNCILORS

Presented by Dr. L. S. Reavley, Sterling

Your Committee wishes to call to the attention of the House of Delegates the excellent work and the personal sacrifice that the members of the Council are giving each year to the Illinois State Medical Society. The success of this Society is due in a large extent to the work of its officers and councilors.

We hope that the Council will continue to furnish to the component societies the post-graduate courses that have been so instructive and popular during the past few years.

Your Committee understands that commissions in the medical corps of the Army, Navy or Public Health Service have been denied members of this Society, who are graduates from certain medical schools because the schools are not recognized by a majority of the state boards instead of the fact that they are graduates from an unapproved medical school. We think that this distinction should be made clear. We agree with the Councilors that these men should be either eligible for these commission in their professional capacities or ineligible for membership in the component societies of the Illinois State Medical Society.

We call the Council's attention to Dr. Hutton's suggestion that a man having been trained over a number of years and who has been honored by the Presidency of our Society should be retained as a councilor-at-large for a five year service instead of three years, as at present, in order that we might by his advice and wisdom.

Respectfully submitted,
L. S. Reavley
G. E. Johnson
J. P. Simonds

Dr. Reavley: I move the adoption of this report. (Motion seconded by Dr. Charles Papik, Chicago).

Dr. G. Henry Mundt, Chicago: I am a past-president. I read the report and there is one portion of it that is very interesting to me. I think only a past-president of the Illinois State Medical Society would be justified in saying what I am saying. I ordinarily agree with my friend Hutton but I do not see any reason why a man who has been president of this Society does not get down and out of function. I think a three year term may be all right but I do not believe the Society needs him badly for a five year term. Some one should say and I have said it.

Dr. J. S. Nagel, Chicago: I do not think there is any necessity for an extension of the time the past-president is in the Council. In the first place, he is in the Council for five years, as President-Elect, as President, and three years after. If you carry on his term as Councilor-at-large for five years he will be in the Council for a good long while. I wish to voice my negative vote against extension of time that the ex-president serves as councilor-at-large.

Dr. W. E. Kittler, Rochelle: We just got out a new book on the constitution and by-laws, and it will be necessary to add an amendment if the time is extended.

Dr. L. S. Reavley, Sterling: We did not ask the House of Delegates to change that. All we did was to call the attention of the House to Dr. Hutton's suggestion.

Dr. L. O. Frech, Decatur: I move that the portion of the report pertaining to the five year period be deleted. (Motion seconded by Dr. G. Henry Mundt, Chicago, and carried).

(The motion to accept the report as amended was carried).

REPORT OF COMMITTEE ON REPORTS OF STANDING COMMITTEES

Presented by Dr. P. R. Blodgett, Chicago Heights

Report of Public Relations Committee: The Committee has rendered a real service to the profession.

Report of Legislative Committee: Being an "off" year, this Committee's activities have been confined to watching the effects of certain proposed legislation at Special Sessions of the Illinois General Assembly.

Report of Medico-Legal Committee: The Committee is on the job and has done much to relieve the profession of defending malpractice suits. As long as this Committee retains its present personnel, our affairs in this field will be properly handled.

Report of Medical Education and Hospitals Committee: This report calls attention to some of the problems facing the profession as regards interns and nurses.

Report of Committee on Benevolence Fund: This Committee needs the support of the secretaries of all county societies. It is apparent that in many instances the work of this Committee would be much easier with this support.

We commend the reports of all Committees reviewed.

Respectfully submitted,
T. A. Bryan
W. E. Kittler
P. R. Blodgett, Chairman

Dr. Blodgett: I move the adoption of this report. (Motion seconded by Dr. Mather Pfeiffenberger, Alton, and carried).

REPORT OF COMMITTEE ON REPORTS OF COUNCIL COMMITTEES

Report of Committee "A"

Presented by Dr. G. H. Edwards,

Report of Educational Committee: Your Committee feels that the report of the Educational Committee is concise, compact and complete and should be given only praise and commendation.

Reports of Scientific Service Committee and Postgraduate Committee: Since the Scientific Service Committee is so intimately related with the Educational Committee we review their reports in the same light. We wish to commend

their expansion of industrial medical program through cooperation of plant safety engineer; also their continuance of postgraduate courses at the past high standard.

Report of Committee on Medical Economics: The report of the Medical Economics Committee which covers ten pages of the official annual report has been carefully reviewed by this Committee. Time does not permit the discussion of all the problems involved, but special attention is called to the statement that hospitals welcome the plan to fill their vacant beds. Your Committee is in accord with the idea of the American Medical Association that subscribers' contracts should exclude all medical and surgical services. As most of you know, the roentgenologists resent having their services included as is done in the present set-up. So far as your Committee is informed, we are not aware of the fact that any plan has had the wholehearted support and official endorsement of the local city, county or state medical societies. It is the hope of this Committee that these various hospital plans are not leading the medical profession toward further regimentation and instilling into the minds of the patients the securing of professional service for corresponding minimal fees. It has been the observation of some doctors that at its inception hospitals welcomed the plan to enable them to fill their beds at even reduced costs. This has led to overcrowded conditions in the hospitals to the extent that attending physicians find it difficult and even impossible to have serious emergency cases admitted at times. This overcrowding might lead to serious results in case of epidemics.

Report of Veterans' Service Committee: The brief report of the Veterans' Service Committee is to the point and highly commendable. It is expected that its activities will be greatly increased in the months and years to come.

Respectfully submitted,
D. B. Pond
A. J. Albright
G. H. Edwards

Dr. G. H. Edwards: I move the adoption of this report. (Motion seconded by Dr. O. W. Rest, Chicago, and carried).

Report of Committee "B"

Presented by Dr. Frank F. Maple, Chicago

Report of the Committee on Maternal Welfare: The report of the Committee on Maternal Welfare has been reviewed by your Reference Committee who would like to report as follows:

Your program as to the organization of each County Medical Society should include the appointment of available consultants who should be called whenever possible for every obstetrical condition where operation is contemplated.

Prenatal care should include an office visit every third week, with weekly visits during the last three weeks; a blood report including Wassermann at the first visit and during the sixth and the ninth months, and urine, weight and blood pressure to be taken at each visit.

A strict observance as to the use of pituitary extract according to the now well known limitations.

The question of the control of operative obstetrics will be answered when each county society is organized as you propose.

Every hospital in Illinois can now have its own supply of blood serum or plasma ready for instant use where blood is required.

During the five years since the organization of this committee in Illinois we have seen a drop in the maternal and fetal death rate. This is a part of the National program under the chairmanship of a man from Illinois.

During the same five years we have seen the birth and progress of the American Obstetrical Congress, also chairmaned by a man from Illinois.

Our Illinois Committee is most valuable under the chairmanship of Dr. Williamson and its personnel should be continued. This is the recommendation of your reviewing committee.

(Dr. Maple: I move the adpotion of this report as now read or may be amended. Seconded by Dr. H. W. Miller, Chicago, and carried).

Report of the Fifty Year Club Committee: We wish to commend the report of the Fifty Year Club Committee and to note that they have been diligent in supplying the press with information regarding their activities. Recognizing the years of service, which the members of this Club have given to the medical profession, is very much worthwhile.

Postgraduate Service: With reference to the Postgraduate Committee, your Reference Committee feels that anyone who has attended one of these postgraduate conferences that this Committee has arranged in various parts of the state, will agree that the Committee has fully justified its appointment. Your Reference Committee realizes the tremendous amount of work that has been necessary to fulfill the obligations that have been imposed on it by the Council. Mere words of praise cannot express fully the gratitude due them by the members of the medical profession of this state. We urge the continuance of this committee.

Report of Committee on Archives: The Reference Committee realizes that the Committee appointed by the Council as a Committee on Archives has had a difficult function to perform. However, anyone who is interested in the history of medicine, must realize that the State of Illinois has a record of achievement in medical progress which perhaps has not been fully recorded. Therefore, we feel that this Committee should be urged to leave no stone unturned to gather information that will preserve for posterity the records and history of medicine in the State of Illinois. Whether or not this Committee should be continued as a separate committee, or its functions incorporated with those of some other Council committee, is left to the judgment of the Council.

Respectfully submitted,
Frank F. Maple
G. R. Ingram
A. H. Bitter

Dr. Frank F. Maple: I move the adoption of these reports. (Motion seconded by Dr. H. W. Miller, and carried).

Dr. H. English, Danville: I move the adoption of the report as a whole. (Motion seconded by Dr. Mather Pfeiffenberger, Alton, and carried).

Report of Committee "C"

Presented by Dr. George W. Post, Chicago

Your Committee, after full and careful consideration and consultation with the Department of Public Welfare, recommends the approval of the report of the Committee on Medical Care of Public Assistance Recipients with the following additional recommendations:

1. The certification of physicians by the County Advisory Committee will be inadequate, if such physicians indicate to the Advisory Committee their willingness to cooperate with the plan.

2. In cases where prescriptions are written, it is obvious that the Department of Public Welfare will have to make use of this information to determine whether druggists' charges are reasonable. Where medicines are dispensed without extra charge, it will not be necessary to indicate what medication is given.

3. It will be understood that in cases where difficult and highly specialized treatment is necessary or protracted treatment is required, additional allowances may be recommended by the County Advisory Committee in reasonable proportion to the requirements in ordinary cases.

4. In cases where anesthesia or surgical assistance is required, for which the hospital does not provide, the County Advisory Board may recommend additional fees for such services.

5. Mileage charges on pavement or roads in good condition shall be 25 cents per mile one way; on unimproved or difficult roads the County Advisory Board may recommend a charge of 50 cents per mile one way.

6. Any practical cutting of "red tape," which can be effected will be appreciated and welcome by the Department of Public Welfare.

Your Committee recommends the approval of the report of the Inter-Professional Relations Committee and concurrence in its recommended action.

Respectfully submitted,
C. H. Hulick
Charles Allison
George W. Post, Chairman

Dr. George W. Post: I recommend the adoption of the portion of the report relating to Medical Care of Public Recipient Assistance. (Seconded by Dr. L. O. Frech, Decatur).

Dr. K. B. Rieger, Freeport: I would like to discuss this. I am a general practitioner in the northern part of the state of Illinois. I think before this report can be accepted that the membership acquaint themselves with the Committee that brought in this report in the first place. The members of the Committee originally were five members from Cook County and two members from downstate, Drs. Camp and Hamilton ex officio. There is not one general practitioner

on the Committee. I do not think they appreciate the problems of the rural doctor. Though there are changes recommended, they are not sufficient. I think the members of the House of Delegates and the members of the component parts of the State Society would like something more concrete, more definite. There has been a good deal of misinformation on the subject. We are told that these people are indigent. They are not indigent in the respect that people on public relief are indigent. You must realize that old age beneficiaries if they own property must assign that property; that takes them out of the indigent class. We hear that more than five million dollars has been spent for indigents. I do not think that includes medical care. Out of 854 old age recipients, 253 were receiving medical care. That is less than a third. There are 101 families in Stephenson County that are getting aid for dependent children. There are two hundred odd children. Those children do not receive anything for medical care. The first child in the family gets $18.00 a month, and every child thereafter gets $12.00 a month. They are not getting any more for medical care. They are going to be taken care of for nothing. The original report shows that if the costs amount to more than $50.00 that you go to the supervisor. You get the approval of the supervisor before you operate, if it is a surgical case. There should be something more definite in the report. We should know who is going to pay for the service. If the approval does not provide adequate help, then what is to be done. That is all right in Cook County Hospital where you have six, eight or ten interns to assist you. What about we fellows in the sticks where we do not have assistance? Gentlemen, we practice medicine in the country a good deal different from the way you practice it in Cook County. You speak about improved roads. I have seen days when you could not go two miles on account of the snow. I go to a house and ask a farmer to take me where I have to go, and he says, "I remember you, you charged me $50.00, it will cost you $5.00." This is a serious problem for us fellows in the country. It is not a serious problem for you in Chicago. We maintain our offices, we have our own x-ray departments.

I move that this portion of the resolution be stricken out and that the President be empowered to appoint a new committee composed of general practitioners from all parts of the state, men who are in actual touch with the problem, not specialists, but general men. Give us men who are our own type and know us.

(Motion seconded by Dr. W. E. Kittler, Rochelle).

Dr. G. H. Edwards, Pinckneyville: I am down in the southern part of the state. Dr. Fullerton and Dr. Andy Hall can tell you of our problems. Twenty-five cents a mile in the dark on an unpaved road and you are lucky if you get there. You have lost money. Dr. Rieger has given you cold facts. I think it is not worth while to review these facts. Twenty-five cents a mile is no pay when you may have to walk two miles to get to the house in mid-winter.

Dr. John Lewis, Carbondale: Those statements are true. In some parts of the country communications are sometimes bad and many patients have to spend an hour or two trying to find the supervisor. When the supervisor finds the doctor is looking for him, he immediately goes fishing. He is very difficult to find. If there were a simplied method whereby we knew what we could do, it would help us. I think this should be turned over to the general practitioners who can figure out a way, without help of secretaries, to fill out these reports.

Dr. Rieger: I move that the entire report as pertains to old age assistance be stricken from the report and that the President be empowered to appoint a committee. . . . .

Dr. G. Henry Mundt, Chicago: The only motion that can be made is to delete that portion of the report.

Dr. Rieger: I move that that portion of the report be deleted. (Motion seconded by Dr. W. W. Fullerton, Steeleville, and carried).

Dr. G. W. Post, Chicago: I move that the portion of the report relating to the Committee on Inter-Professional Relations be approved. (Motion seconded by Dr. J. W. Long, Robinson, and carried).

Report of Committee "D"

Presented by Dr. L. O. Frech, Decatur.

Report of Committee on Tuberculosis: Your Reference Committee believes that the report of the Committee on Tuberculosis is quite inclusive, and their program so organized, that when

actually working will result in a decrease in incidence of tuberculosis in this state.

We assume under education, both to the lay public and to the physician, that the necessity for tuberculin tests of children as well as adults, and x-ray will be stressed. This Committee is commended for its activities.

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. C. B. Ripley, and carried).

Report of Committee on Control of Cancer: Your Committee is well aware of the importance of cancer control and eradication and is cognizant of the fact that such control is a process that is slow, tedious and expensive. We commend this Committee upon its excellent work and progress and deem it most desirable that this excellent work be continued.

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. W. E. Kittler, Rochelle, and carried).

Report of Committee on Physical Therapy: The Reference Committee concurs in the recommendations of the Committee and especially that one for county medical societies to include physical therapy in their programs for the year and to the extent that physicians become better acquainted with the needs of, and indications for, physical therapy. Our Committee believes that the recommendation to conduct a physical therapy column in the Journal should be referred to the Council of this Society.

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. J. J. Pflock, Chicago, and carried).

Report of Committee on Venereal Disease Control: Your Committee commends this Committee on its report and believes that there should be closer cooperation by physicians in reporting cases, immediately, which have discontinued treatment, and contacts, so that the proper authorities can make contacts and bring these cases under proper control and treatment and thereby alleviate the spread of venereal disease. We think that the abeyance of venereal diseases rests largely upon controlling the actions and treatment of the patient.

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. Robert H. Hayes, Chicago, and carried).

Report of Committee on Industrial Health: The Reference Committee commends the report of this Committee and offers encouragement in further extending the scope of this work. Inasmuch as there is an increase in the tuberculosis rate and inasmuch as the age of the worker is constantly increasing, due to the war effort, and the number of degenerative diseases are daily augmented.

Your Committee recommends that a uniform minimum standard of examination be developed and adopted, and that industry be encouraged to cooperate with such a program.

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. Charles Allison, Kankakee, and carried).

Report of Committee on Child Health Problems: The Reference Committee agrees to the importance of the work of this Committee and to the fact that child health problems need concerted effort in their solution and urge that the fine efforts of this Committee be continued.

Respectfully submitted,
R. K. Packard
Oscar Hawkinson
L. O. Frech

(Dr. Frech: I move the adoption of this portion of the report. Motion seconded by Dr. Charles Allison, and carried).

The Secretary: I had a special delivery letter this morning from the Chairman of the Committee on Mental Hygiene, Dr. J. C. Krafft who is quite ill at home and sends his report. With your permission I would like to give this report to Dr. Frech to read.

Dr. Frech read the report.

Dr. Frech: I move the adoption of this last report. (Motion seconded by Dr. C. E. Wilkinson, Danville, and carried).

Dr. Frech: I move the adoption of the report as a whole. (Motion seconded by Dr. W. C. Blaine, Tuscola, and carried).

REPORT OF COMMITTEE ON REPORTS OF THE EDITOR, SCIENTIFIC WORK, SOCIAL SECURITY PROBLEMS, AND MEDICINE AND THE WAR.

Presented by Dr. Robert H. Hayes, Chicago.

Report of the Editor: The Society should accept with gratitude the selection by the Council of the Illinois State Medical Society of Dr. Harold M. Camp, as the Editor of the Illinois Medical Journal; also for the establishment of an Advisory Editorial Board, a Journal Committee and an experienced Business Manager, Mr. L. E. Malley, who has taken charge of

all advertising. We commend the Editor for his able revision of the appearance and the arrangement of subject matter making for greater conservation of material and economy of publication.

The scientific subjects approved by the Editorial Board have allowed a greater selection and permitted a wider variety of subjects to be published.

The Business Manager in cooperation and by approval of the Editor, the Editorial Board and the Journal Committee has made admirable progress in revising and selecting the advertising in the Journal with the result that only ethical advertising now appears and there is a noticeable increase in the number of ads appearing in the pages of the Journal.

We also wish to compliment the Editor for the full and complete articles concerning the medical aspects for the needs of the Army, Navy and Marine Corps; the function of the Procurement and Assignment Service has been definitely pointed out in concise articles and the needs of the services.

We wish to commend and thank the Editor and all those who have been of assistance to him, especially our praise to Miss Jean McArthur for her untiring assistance.

(Dr. Hayes: I move the adoption of this portion of the report. Seconded by Dr. I. H. Neece, Decatur, and carried).

Report of Committee on Scientific Work: The Reference Committee feels that the Committee is doing a grand job and the downstate members in particular wish to express their gratitude for all the County Societies. The work of this Committee has revived some Societies and has made the existence of others much easier.

A word to the speakers sent out to give papers and clinics by the Committee. A poor paper can do a County Society more harm than one can realize. A careful presentation of a paper, knowledge of one's subject, avoidance of ultra-scientific discussions and not treating one's audience as a group of geniuses nor as a group of nit wits have some points to be considered. The interjection of stories, possibly humorous, will often many times bring a tired smile to the old country doctor's face and wake up a lagging, drowsy audience. Showmanship is an attribute devotedly to be wished for in speakers.

The work of Miss Jean McArthur deserves special commendation. Her cheerful help is more appreciated than words can express.

(Dr. Hayes: I move the adoption of this portion of the report. Seconded by Dr. C. M. Fleming, Rushville, and carried).

Report of Committee on Social Security Problems: The Reference Committee feels that the Committee submitting this report has had a thankless and difficult job. We feel that they have done as well as could be humanly possible with the set-up as it now is. Brick bats are sure to come but the loudest squawkers are from those who seldom attend their own Society meetings nor do they attend the State or National meetings. It will be necessary to inform our component Societies and squelch the critics with "If you can't offer anything constructive, better shut up."

We feel that the resolution offered by Dr. English of Danville at the Tuesday session is well thought out. The main objection to the whole set-up seems to be inability of the government, both National and State, to pay the doctor directly due to present existing laws. The resolution as presented aims at changing existing laws. We feel it merits adoption as this is a National as well as a State problem.

We recommend that the action of the State Society be accepted by each County Society, even if it is not entirely satisfactory to the County Society. "Harmony is the strength of all organizations including ours."

(Dr. Hayes: I move the adoption of this portion of the report. Motion seconded by Dr. W. W. Fullerton, Steeleville, and carried).

Medicine and War: Again medicine of America has been called upon to fulfill its duty to the American government and its armed forces at a time of strife and has not failed to meet that challenge.

The great need of medical men for the Army, Navy, and Marine Corps has caused the enlistment of many of our members into the several services, resulting in untold sacrifices on their part and perhaps neglect to the public from their localities. The Procurement and Assignment Service Committee of the State Society under the direction of Dr. Phifer, has performed a Herculean duty and must continue to function untiringly as medicine is on the spot

and must produce to continue unhampered and if we fail, regimentation surely confronts us and is sure to follow should we fail in our duty. Medical men up to forty-five years of age must meet this request from the armed forces and Illinois physicians are now and will continue to fulfill their duties.

The motion passed by the House of Delegates at the Tuesday session should aid in informing the profession and assist in promoting applications for commissions in the service of our country. We owe a debt of gratitude to the members of the Procurement and Assignment Service Committee for their untiring efforts and untold praise to the medical men, who have already given their all for the preservation of democracy, human life and the American way of living.

Respectfully submitted,
W. J. Gillesby
C. M. Fleming
R. H. Hayes, Chairman

(Dr. Hayes: I move the adoption of this portion of the report. Motion seconded by Dr. L. O. Frech, Decatur, and carried).

Dr. Hayes: I move the adoption of the report as a whole. Motion seconded by Dr. W. E. Kittler, Rochelle, and carried.

REPORT OF COMMITTEE ON REPORTS OF COMMITTEE ON MISCELLANEOUS BUSINESS, REPORTS OF WOMAN'S AUXILIARY, AND OTHER MATTERS REFERRED BY THE PRESIDENT.

Presented by Dr. Ariel Williams, Chicago, for Dr. R. R. Ferguson

Report of the Woman's Auxiliary: Your Committee has reviewed the report of the President of the Woman's Auxiliary and wish to commend the entire membership of the Auxiliary for their interest and work for the State Society and its county societies.

We wish to call your attention to the fact that there are only twenty auxiliaries in the State, whereas there are 92 county medical societies.

Commendation is especially due the members of the Auxiliary for their interest in better nutrition for a nation at war and for their contribution to the Benevolent Fund of $709.00 during the past year.

Your Committee also wishes to call the attention of the Secretary to the report of the Advisory Committee to the Auxiliary which report is attached hereto and which will now be read as part of this Committee's report.

Respectfully submitted,
R. R. Ferguson, Chairman
Frank Deneen
H. F. Bennett

May 19, 1942

Mr. President and Delegates:

Matters referred to the Committee by the Woman's Auxiliary has been handled with propriety and dispatch. The Woman's Auxiliary to the Illinois Medical Society is interested and sincere in its efforts to promulgate the salient features of medical standards, and procedures of organized medicine to its lay friends, and the public at large. The Doctors' Ladies, we believe, are the best and truest friends of medicine.

The Committee believes every component Society should lend its assistance to the State Auxiliary officers in their efforts to organize a local auxiliary to each and every County Society in the State.

Respectfully submitted,
Advisory Committee to the Auxiliary
Harold M. Camp
Everett P. Coleman
Edwin S. Hamilton
Rollo K. Packard
Frank P. Hammond, Chairman

Dr. Williams: I move the adoption of this report. (Motion seconded by Dr. H. E. L. Timm, Chicago, and carried.)

There was no report from the Committee on Miscellaneous Business and no matters were referred by the President, so this represents the entire report.

REPORT OF COMMITTEE ON RESOLUTIONS

Presented by Dr. Mather Pfeiffenberger, Alton

Resolutions No. 1, 4, 5, 6, and 7 (pages 91 to 98) are all of the same character and on the same subject. The Committee thought the one presented by Dr. Andy Hall (No. 1, page 91) was the one we would draw your attention to more than the others. Resolutions No. 2 and 3 (pages 93 and 94) the Committee considered as controversial, and it is going to lay them in the laps of the House of Delegates. We are making

no recommendations. We think they all have merits, but we will let you decide.

1. *United States Citizenship a Requisite For a Position on the State Payroll*

(See Page 75)

Dr. W. E. Kittler, Rochelle: I move the adoption of this resolution as read. (Seconded by Dr. K. B. Rieger, Freeport).

Dr. S. E. Munson, Springfield: Either the Chairman of this Committee or Dr. Andy Hall should be asked to qualify that part of the resolution with reference to Russia. Russia is now one of our allies and no reference should be made with regard to one of our allies. I think there should be some qualification.

Dr. G. Henry Mundt, Chicago: I move that portion of the resolution with reference to the ideology of Germany, Italy and Russia should be changed to read Germany and Italy, and that the word Russia be deleted. (Seconded by Dr. Andy Hall, Mt. Vernon, and carried).

The President: What is your pleasure with reference to the resolution?

Dr. G. W. Post, Chicago: I move the adoption of the resolution as amended. (Seconded by Dr. R. H. Hayes, Chicago, and carried).

4. *Right to Practice Medicine by Aliens*

(See Page 77)

The Secretary: May I say that we received a similar resolution from a number of Counties.

Dr. I. H. Neece, Decatur: I move the adoption of this resolution. (Seconded by Dr. C. H. Hulick, Shelbyville).

Dr. G. Henry Mundt, Chicago: I move an amendment that it is the sense of this House that the resolution is correct. (Seconded by Dr. W. W. Fullerton, Steeleville, and carried).

The motion as amended was carried.

5. *Restriction of Right to Practice Medicine to Citizens of the United States who have Complied with the Requirements of the Laws of the State of Illinois*

(See Page 77)

The President: Before this resolution is discussed may I say that at the present time graduates of sub-standard schools or Class B schools are being taken into the service. They are now required to present about five letters from graduates of Class A schools certifying to their qualifications.

As far as the question of aliens is concerned, they are now trying to bring about a recommendation whereby that will be done and they will be given some consideration by General Hershey.

Dr. Harlan English, Danville: I move that this resolution be tabled pending these details. (Motion seconded by Dr. W. W. Fullerton, Steeleville, and carried).

6. *Right to Practice Medicine Restricted to Citizens of The United States*

(See Page 77)

Dr. V. A. McClanahan, Aledo: Has not a resolution of the same character been adopted in many of the state societies?

The President: I cannot tell you.

Dr. A. H. Bitter, Quincy: I move that the resolution be tabled. (Motion seconded by Dr. V. A. McClanahan, Aledo, and carried).

Dr. E. S. Hamilton, Kankakee: Have I the permission of the House to read section 4, Chap. XI, of the By-laws?

> "Every registered physician holding the title of Doctor of Medicine or its equivalent, who resides in the jurisdiction of a component society, and who is of good moral character and professional standing, and a citizen of the United States, shall be eligible to membership."

The President: The resolution is tabled.

7. *Right to Practice Medicine Restricted to Citizens of The United States*

(See Page 78)

Dr. L. J. Hughes, Elgin: I move that the resolution be tabled. (Motion seconded by Dr. T. A. Bryan, Mattoon, and carried).

Dr. Pfeiffenberger: Your Committee after considering these resolutions wishes to ask that the special matter presented in all these resolutions be considered by a Committee appointed by the Council and a proper resolution drawn up and presented to the State Legislature for consideration. I so move. (Motion seconded by Dr. L. O. Frech, Decatur, and carried).

2. *Appointment by the American Medical Association of a Liaison Committee to meet with and Advise the Social Security Board in Matters of Medical Care.*

(See Page 75)

Dr. C. E. Wilkinson, Danville: I move its adoption. (Seconded by Dr. H. W. Miller and carried).

3. *Medical Services to Recipients of Old Age Assistance*

(See Page 75)

Dr. G. Henry Mundt, Chicago: I move that the resolution be approved in principle and that its functioning be referred to the Council.

The President: We have in this state no lien law; in New York they have.

Dr. Mundt's motion seconded by Dr. E. S. Hamilton, Kankakee).

Dr. S. E. Munson, Springfield: Why do you refer to surgeon and physician?

The President: That is a controversial affair.

Dr. E. S. Hamilton, Kankakee: According to the state law, there are different kinds of physicians.

Dr. L. O. Frech, Decatur: I would amend that motion that the resolution be referred to the Committee on Old Age Assistance for study and consideration. (Amendment seconded by Dr. A. H. Bitter, Quincy). (Amendment voted on and was lost. The original motion was carried).

8. *Assistance of Woman's Auxiliary Sought in the Preparation of Local County Societies' History.*

(Presented by Dr. R. R. Ferguson)

Whereas, the office of permanent Historian has been abolished and the Archives Committee has been selected for this office, and

Whereas, the individual county medical societies should also have a local history of their own Society and its individual members, and

Whereas, the Woman's Auxiliary may be of great assistance in the preparation of such a local history, therefore

Be it resolved, that the Woman's Auxiliary be requested to cooperate with the officers of their respective county societies in the preparation of such a local county society history.

Dr. Pfeiffenberger: I move its adoption. (Motion seconded by Dr. Frank P. Hammond, and carried).

9. *Organization of an Auxiliary to every County Medical Society to Assist in the Compilation of a History of the County Societies*

(Presented at the request of Mrs. Harry Otten, President of the Woman's Auxiliary)

Whereas, Dr. E. H. Weld, President-Elect of the Illinois State Medical Society, in his address before the Woman's Auxiliary on May 19, 1942, suggested that the Auxiliary assist in compiling histories of the practice of medicine in counties in Illinois, therefore be it

Resolved, that the Woman's Auxiliary to the Illinois State Medical Society respectfully request the House of Delegates to recommend the organization of an Auxiliary to every County Medical Society that Dr. Weld's suggestion may be promoted. And be it further

Resolved, that the work of compiling the histories be under the direction of the Illinois State Medical Society.

Dr. Pfeiffenberger: I move the adoption of this resolution. (Motion seconded by Dr. Ariel Williams, Chicago, and carried).

10. *Annual or Bi-Annual Registration Fee for Physicians*

(Presented by Dr. E. H. Weld)

Inasmuch as we have never had an annual or bi-annual registration fee for physicians licensed to practice in this state, and

Inasmuch as we do not feel such a registration would benefit the general public or the medical profession, be it highly resolved that this House of Delegates express themselves as being opposed to such registration.

Dr. Pfeiffenberger: Dr. Weld may have some additional points to give you.

Dr. Weld: There is a movement among some groups, especially the dentists, to have a bi-annual registration of dentists with a registration fee. I feel that if a bill for a registration fee for dentists gets supoprt that a similar registration fee for physicians will be sought. I do not feel that we as physicians want it. I want to bring in this resolution to show to the people who are interested in the dental profession and other interested groups that we do not approve of such a registration fee.

Dr. C. B. Ripley, Galesburg: I move the adoption of the resolution. (Seconded by Dr. J. W. Long, Robinson, and carried).

11. *Inclusion under Competitive Civil Service of Position of Managing Officers and Medical Personnel in State Hospital Service*

(Presented by Dr. Francis Gerty, Director, Neuropsychiatric Clinic)

Be it resolved, that the Illinois State Medical Society recommends that the position of managing officers and medical personnel in State Hospital service be included under competitive Civil Service.

The President: I would like to have Dr. Simonds make a few statements concerning this resolution.

Dr. J. P. Simonds, Chicago: This matter was presented to the Council of the Chicago Medical Society by Dr. Gerty. It was referred to the Public Relations Committee; they reported favorably and it was adopted without very much discussion. The idea behind the whole movement is perhaps twofold; one is that it will protect men who are in positions of responsibility in state hospitals against political removal; second, it will perhaps provide a higher type of man for medical service; third, it will remove the many aliens that are holding positions.

Dr. Pfeiffenberger: I move the adoption of the resolution. (Motion seconded by Dr. I. H. Neece, Decatur).

The President: There is some good in this motion because of certain things and I think you ought to give it consideration.

Dr. S. E. Munson, Springfield: I move as a substitute motion that it be referred to the Council for consideration because of the very things behind it. This may be for the protection of men who have a Ph.D. in Neurology and Psychiatry. This may be entirely in their interest. No one could pass this examination except some one with a real knowledge of psychiatry. The examination will be written by doctors who practice psychiatry. (Amendment seconded by Dr. W. C. Blaine, Tuscola).

Dr. W. E. Kittler, Rochelle: I have the utmost confidence that it will be properly handled if referred to the Council for action.

(Amendment carried, and original motion as amended carried).

12. *Charges of Unethical Conduct Against Physicians who give Evidences which might be Deemed a Bill of Health to Person known to be or Suspected to be Prostitutes*

(Presented by the Venereal Disease Committee of the Illinois State Medical Society).

After conference with the Director of the State Health Department, Dr. Roland R. Cross, and with the Chief of the Division of Venereal Disease Control in the State Health Department, Dr. H. M. Soloway and with the Venereal Disease Consultant of the United States Public Health Service, District No. 3, Dr. David C. Elliott, it was recommended that the committee go on record as favoring that charges of unethical conduct be brought against any physician who issues laboratory reports, prescription blank notices, or other evidences which might be generally deemed a bill of health to persons known to be prostitutes or suspected of being prostitutes for their use in the practice of prostitution. Such physicians shall be deemed guilty of unethical practice.

At the conclusion it was believed that this measure is warranted to prevent the prostitution of the practice of medicine by any misguided or misdirected individual member and that the medical profession should assist in the national drive to control venereal disease and to prevent the spread through any form of encouragement to commercialized prostitution.

Dr. Pfeiffenberger: Your Committee recommends that some sort of action be taken on this problem.

Dr. C. B. Ripley, Galesburg: I would refer it to the Council, and I so move. (Motion seconded by Dr. J. W. Long, Robinson, and carried).

Dr. Pfeiffenberger: I want to say a word of warning regarding this — be very careful about your prescription blanks, because people of this ilk can take your blanks and sign your name.

13. *Resolution of Thanks*

Dr. Pfeiffenberger: I move that the usual resolution of thanks be sent to the Sangamon County Medical Society, the Woman's Auxiliary of Sangamon County, the Mayor, the press, the Hotels, etc. for their efforts in making this 102nd annual meeting a success. (Motion seconded by Drs. G. W. Post, Chicago, and Harlan English, Danville, and carried).

The President: There is a special Resolutions Committee to bring in resolutions on the deaths of Dr. John R. Neal and Dr. Charles S. Skaggs.

Dr. Charles S. Skaggs

(Read by Dr. C. B. Ripley, Galesburg)

On the seventh day of this month, after years of patient and uncomplaining suffering, rest came to our friend and fellow member of this Society, Dr. Charles S. Skaggs.

We who knew him best feel sure he would not have willed it otherwise. A man of deep religious beliefs, firm convictions, and fearless

championing of the right, Dr. Skaggs will long be remembered by his neighbors, friends and acquaintances as a just and righteous citizen.

As a Past-President of this Society his memory will be cherished because of his great love for his profession, his never failing interest in humanity and his utter sincerity.

To the members of his family we wish to express our great sympathy in their and our real loss.

(Signed) THE HOUSE OF DELEGATES OF THE ILLINOIS STATE MEDICAL SOCIETY

By James H. Hutton
James S. Templeton
Clarence B. Ripley

Dr. Ripley: I move the adoption of this resolution, and request that a copy be placed on the records of the Society, and a copy sent to the family of Dr. Skaggs. (Motion seconded by Dr. Andy Hall, Mt. Vernon, and carried).

Dr. John R. Neal

(Read by Dr. C. B. Ripley, Galesburg)

On July 1st of the past year we lost from our membership one of the most valuable of our friends, advisors and comforters.

One of the most tireless workers for the good of our profession.

One who stood for years between us and unfair practices.

One whose mind was always alert and actions quick to protect our rights.

One who fought for honesty and directness in all our dealings.

One who knew and loved us all even though he recognized our shortcomings.

One who asked nothing from us, but accepted gracefully and humbly the few honors we were able to show him.

A Past-President of this Society.

A man always smiling, knowing us all by our first names.

A man who was considered by us all as indispensable, if any man can be indispensable.

But he was taken and in his taking we all have felt a great and personal sorrow.

So to the family of John R. Neal we of the Illinois State Medical Society take this simple and entirely inadequate way of trying to express to them our great sympathy in their and our irreparable loss.

(Signed) THE HOUSE OF DELEGATES OF THE ILLINOIS STATE MEDICAL SOCIETY

By James H. Hutton
James S. Templeton
Clarence B. Ripley

Dr. Ripley: I move the adoption of this resolution and move that a copy be spread upon the records of the Society and a copy sent to the family of Dr. Neal. (Motion seconded by Dr. E. E. Davis, Avon, and carried).

The President: There is no unfinished business, so we will pass to new business.

The Secretary: The Committee on Awards presents the following report:

First Prize (Silver Medal) to Dr. Frederick H. Falls and Miss Charlotte Holt, University of Illinois College of Medicine, and Division of Child Hygiene, Department of Public Health, Chicago, for the exhibit on "Abortion."

Second Prize (Bronze Medal) to Dr. John M. McCuskey, Peoria, and William J. Morginson, Springfield, for exhibit on "Treatment of Epitheliomas with Combination of X-Ray and Destructive Procedures. Report of Results with Six Hundred Lesions."

Third Prize (Bronze Medal) to Dr. Leo L. Hardt, Dr. LeRoy H. Sloan, Dr. Morris Weissman, Municipal Sanitarium, Chicago, for exhibit on "Gastroscopy as an Aid in Diagnosis; Gastroscopic Findings in Pulmonary Tuberculosis."

Certificates of Merit to:

1. Dr. A. A. Mertz, Decatur, for exhibit on "An Improved Method of Fixation of Fractures of the Neck of the Femur."
2. Dr. Laurence M. Marsh and Dr. John D. Ellis, Chicago, for exhibit on "Skeletal Traction through Metacarpals."
3. "Health and War." Exhibited by the State of Illinois, Dwight H. Green, Governor, Department of Public Health, Roland R. Cross, M.D., Director, Springfield. (Exhibit is on loan from British Library of Information).

The President: The next order of business is the election of Emeritus members.

The Secretary. The following candidates for Emeritus membership are presented:

C. W. Hopkins, 130 Kenmore Ave., Elmhurst, Ill.

H. H. Hagey, 800 W. 78th St., Chicago.

Anna Blount, 146 S. Oak Park Ave., Oak Park, Ill.

James A. Day, Springfield, Ill.

Brown Pusey, Golf, Ill.

Isabella C. Herb, Hubbard Woods, Ill.

Anton Mueller, 1523 W. 18th Street, Chicago

Frank E. Simpson, 445 Barry Avenue, Chicago

Andrew Gansevoort, 10900 S. Michigan Avenue, Chicago

These candidates have been qualified and I move that this House grant emeritus membership to those named. (Motion seconded by Dr. F. H. Muller, Chicago, and carried).

There is one more, Dr. E. M. Minnick, from McLean County, and it is requested that we be authorized to petition the American Medical Association to elect him an affiliate member at the meeting to be held in two weeks. In order to do that, this body must grant him emeritus membership. He has had 35 years of continuous fellowship in the American Medical Association.

I move that this be granted. (Motion seconded by Dr. S. E. Munson, Springfield, and carried).

I have a request for honorary life-membership with remission of dues for Dr. E. E. Bullard, Girard, Ill.

Dr. R. H. Rutherford, Carlinville: I move that it be granted. (Motion seconded by Dr. I. H. Neese, Decatur).

Dr. R. H. Hayes, Chicago: I believe that will set aside a provision in the by-laws. I move it be tabled.

The Secretary: The House has waived the provision in the by-laws and has been doing it for the past ten years in each case acted on in the House. (Motion carried).

We have another case, Dr. J. H. Gann, Brookport. Several years ago Dr. Gann was elected permanent secretary of his county society. He has paid his dues for the last seven years although he has been unable to practice, and for the last year he has been totally disabled. I think the same action should be taken in his case.

Dr. Andy Hall, Mt. Vernon: I so move. (Motion seconded by Dr. W. E. Kittler, Rochelle, and carried).

The President: I want to thank not only the men who did their part in the program so far as arrangements were concerned but each man who served on a committee and did his part in making this meeting a success.

Dr. John S. Nagel, Chicago: I move that the House of Delegates extend a standing vote of thanks to the Chairman for the masterly way in which he handled the sessions of the House of Delegates. (Motion seconded by Dr. Charles Drueck, Jr., Chicago, and carried).

Dr. W. E. Kittler, Rochelle: I would like to make a similar motion for the fine way in which Dr. Templeton conducted the President's Dinner. (Motion seconded by Dr. J. W. Long, Robinson, and carried).

Dr. K. B. Rieger, Freeport: Is appointment on the Committee on Aid to Dependent Children and Old Age Recipients made by the President of the Society or is by recommendation of the Council?

The President: It is a Council Committee.

Dr. Rieger: Under those circumstances, I move that the House of Delegates recommend to the Council that they appoint the following as their committee on Aid to Dependent Children and Old Age Recipients to confer with the Welfare Department and to arrange for a more equitable fee schedule, Drs. T. B. Williamson, G. H. Edwards, H. D. Junkin, O. L. Bettag, J. O. Cletcher, William Scanlan, and K. B. Rieger. (Motion seconded by Dr. O. L. Bettag, Pontiac).

Dr. Harlan English, Danville: I doubt the wisdom of changing the personnel of this committee. Here is a group of men who have spent a lot of time and effort working on this committee, and they have some good contacts.

Dr. G. Henry Mundt, Chicago: Inasmuch as it is a Council committee, it is not fair to insist upon their appointing certain people. I would amend the motion to the effect that the list of names as given be recommended to the Council for consideration in the formation of the Committee. (Motion seconded by Dr. Charles Drueck, Jr., Chicago).

Dr. Rieger: If the House would recommend it to the Council it would have a lot of merit.

Dr. E. S. Hamilton, Kankakee: From the viewpoint of expediency, this is too large a committee to function properly. If you get a committee of seven, eight or nine it is unwieldy.

Dr. Rieger: There are nine on the committee now, seven and two ex officio.

Dr. Hamilton: Under those circumstances the Chairman of the Council will still be an ex officio member.

Dr. A. H. Bitter, Quincy: My reaction to this motion is this: The delegates have duly elected Councilors and if the delegates do not have sufficient confidence in the Councilors to appoint a satisfactory committee, there is something wrong. I am definitely opposed to this motion.

The President: I will read this motion to you as Dr. Rieger has written it out:

"I move Mr. President, that the President of this Society dismiss the present Committee on Public Welfare and Old Age Assistance and that the President appoint a new committee composed of seven general practitioners from the northern, central and southern part of the State to meet with the Welfare Department of the State and to arrange for a more equitable fee schedule, etc., this committee to consist of T. B. Williamson, Mt. Vernon, O. L. Bettag, Pontiac, H. D. Junkin, Paris, G. H. Edwards, Pinekneyville, J. O. Cletcher, Tuscola, William Scanlon, LaSalle, and K. B. Rieger, Freeport."

Dr. Harlan English: I would like to second Dr. Bitter's idea.

Dr. A. H. Bitter, Quincy. I move that this motion be tabled. (Seconded by Dr. J. J. Pflock, Chicago, and carried).

Dr. L. E. Day, Chicago: I would like to make a motion that the names of these gentlemen be submitted to the Council for consideration and possible appointment. (Seconded by Dr. R. H. Hayes, Chicago).

Dr. Pfeiffenberger: A point arises in my mind, with a committee scattered over the state how will they function?

Dr. Hamilton: They will have to go to Chicago.

(Motion carried on a rising vote).

The President: At this time I want to present to the members of the House of Delegates the Chairman of the Committee on Arrangements and one of the best chairmen we have ever had. He has done a tremendous job. Dr. Hermon H. Cole.

Dr. Cole: This is a great surprise to me. I only wish to say that I hope you fellows have enjoyed yourselves. I take a bow only as representative of the committees which I have appointed. They have done all the work. I do not think the thanks should go to me personally, but should go to the entire committee.

The President: I want to present to you your President-Elect, Dr. George W. Post.

Dr. Post: While deeply mindful of the honor you have conferred on me, I am also deeply mindful of the responsibilities it entails. To make a success of it I have to bespeak your hearty cooperation, not only of the delegates but of the entire membership of the State Society.

Dr. Harlan English, Danville: I would like to ask a question. Should we go back home and try to get along with the present proposal in connection with old age assistance, or throw the whole thing over and say the House of Delegates will have nothing to do with it, or should we try to work it out?

The President: About sixty counties in the state have approved it. . . It is a problem that has to be considered. You will no doubt have a new committee in a few days. I hope they will have far more success than I have. It is not an easy problem. You cannot get fees out of this; the man who makes only forty dollars a month is quite indigent. I only hope the new committee will solve the problem. The only thing I am afraid of in connection with it is that we may have a social security act in another form.

We now come to the induction of the President-elect into office. It has been a great pleasure to work with you in the past year. I want to induct into office a man who will lead you for the coming year, Dr. E. H. Weld. Dr. Weld, the members of the State Society have found you the man to lead them. It is difficult for a man to have a finer crowd to work with. I want to present to you the historical gavel and with it to induct you into the office of the President of the State Society.

Dr. Weld: Members of the House of Delegates, Mr. Past President, Mr. Secretary, Mr. Chairman of the Council, and others: I think my first duty in accepting this gavel is to express the sincere appreciation that we all have for Charlie.*

Dr. Weld: May I ask my good friend and your good friend, Andy Hall, to introduce our second vice-President.

Dr. Hall: The second vice-president happens to come from my district, the Ninth. He formerly lived in the county in which I reside, Hamilton County. He is one of the best physicians and one of the best diplomats I know of in southern Illinois. It gives me great pleasure to introduce Dr. Charles O. Lane of West Frankfort.

Dr. Lane: I want to thank the Society and to thank Dr. Hall for his remarks.

On motion duly made and seconded the House adjourned *sine die* at 12:45 P.M.

*The address of President Weld appears as an original article in this issue of the Journal.

LOW-COST DIET ADEQUATE FOR EXPECTANT MOTHERS

A woman who is going to have a baby can live on a diet costing as little as 34 cents a day, and still get generous amounts of all the food substances she needs.

This expectant mother diet was worked out by Columbia University nutrition students, and announced by Dr. Clara Taylor, Columbia University assistant professor of nutrition. The 34-cents-a-day diet is rich in minerals, and vitamins without appreciably increasing calories.

A sample day's menu consists of:

Breakfast—four prunes; one cup of oatmeal with a little sugar; two slices of whole wheat toast; one tablespoon butter; one glass of milk.

Lunch—cream of tomato soup made from one-half cup tomatoes, one-fourth cup evaporated milk, one teaspoon flour and one teaspoon fat; salad of one egg, lettuce, mayonnaise; cheese sandwich (three ounces of cheese and teaspoon of butter) on whole wheat bread; one glass of milk.

Dinner—three ounces broiled beef liver; one baked potato; one cup kale; two slices whole wheat bread; two tablespoons butter; one banana; one glass of milk.

Sugar allowance for a day is one ounce.

Vitamin B, calcium, and iron are most likely to be deficient in the food eaten by families on low income.

Vitamin B, Dr. Taylor points out, can be obtained from whole grain cereals, calcium from milk, and iron from green leafy vegetables and eggs.—*Science News Letter.*

A break in the chain of medical teaching in any country spells disaster for the next generation.—*Raymond B. Fosdick, in the Rockerfeller Foundation Review, 1940.*

THE NAVY NEEDS DOCTORS AND DENTISTS

Recent rumors that the Navy is no longer accepting applications for commissions in the Medical and Dental Corps were declared today (Mon.) by Naval procurement officers as being without foundation.

Comdr. Emil J. Stein, senior medical officer at the Office of Naval Officer Procurement in the Board of Trade Building, said that the enlistment of thousands of men daily made it imperative for the Navy to keep the fighting fleets and shore establishments supplied with doctors and dentists to maintain the high Navy health standards.

"The procurement of doctors and dentists is vital to the Navy now. Trained men are needed to treat the sick and wounded. We are here to help these trained men get into naval service with a minimum of delay," he pointed out.

Physicians and dentists from 21 to 50 years of age who can pass the physical and other requirements may apply for commissions. Practicing physicians and dentists receive ranks ranging from lieutenant, junior grade, to lieutenant commander according to specialties, experience and other qualifications.

Medical and dental students and prospective medical and dental students who have been accepted for admission by recognized schools are eligible for commissions if under 30 years of age and if physically and otherwise qualified. These men receive the rank of ensign and are allowed to finish their studies before being called to active service. Having been sworn into the Navy, they are not subject to the selective service system.

Graduate medical students who have not completed interneships can be commissioned and allowed to finish this phase of training before they are called to active duty.

Applicants living in the thirteen states in the Ninth Naval District — Illinois, Wisconsin, Minnesota, Iowa, Missouri, Kansas, Nebraska, North and South Dakota, Indiana, Kentucky, Ohio and Michigan — should apply in person or by letter to the Office of Naval Officer Procurement, Board of Trade Building, Chicago. Those living at distant points will be notified where to report for physical examinations if they qualify otherwise.

HOW TO BAN WAR TALK

Ed. Murrow, who was CBS' correspondent in London, had a dinner date at the home of CBS' publicity director, Louis Ruppel. Murrow soon is returning to London, and his host wanted him to enjoy an evening of complete relaxation. "I've warned all the other guests that there must be no war talk," Ruppel informed . . . "How will you stop them from talking about the war?" asked Murrow . . . "I've found a way," Ruppel assured . . . The guests arrived, met Murrow and the conversation throughout the dinner was completely free of war talk. For the food was delivered and served by two men especially hired for the occasion—two Japanese.

—*Leonard Lyons.*

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY

A. Lapi, M. D.
AND
O. T. Schultz, M.D.
St. Francis Hospital
EVANSTON

CASE 1 — SPONTANEOUS RUPTURE OF LEFT VENTRICLE OF HEART

A 63 year old white male executive was admitted to St. Francis Hospital on 4/24/42 at 5:50 p.m. and died ten minutes after having been put to bed. The story as related to the attending doctor by the patient early that morning dated back to 4/17/42, at which time the patient consulted the plant physician because of steady precordial pain. He was informed that his blood pressure was 180/120 and was advised to curtail his physical and mental activities. On 4/24/42, upon getting out of a hot bath, he experienced severe precordial pain which radiated down both arms to the elbows. The patient admitted that the precordial pain had never really completely subsided since its onset one week previously, but that he felt well enough to play a round of golf on 4/23/42. When seen by his physician on 4/24/42 the patient was perspiring profusely but his color was good and he did not appear to be acutely ill. The temperature was 97.6, the pulse was 60, and the blood pressure was 110/70. Complete bed rest was advised and a bedside electrocardiogram was done, which was reported as follows:

P.R. interval, 0.14; Sinus mechanism; Regular rhythm; S-T^1 displaced upward; S-T^3 displaced downward; S-T^4 notably displaced upward. Interpretation: Recent anterior coronary occlusion.

Additional supportive treatment was prescribed and the patient remained at home until that evening, when he was admitted to the hospital on the insistence of his wife. The physician saw him immediately as he was put to bed and left for a moment to write orders at the chart desk. He was summoned immediately by the patient's wife and learned that after vomiting once the patient expired immediately. Heroic measures failed to revive him.

The essential findings at necropsy, which was begun within one hour after death, relate to the cardiovascular-renal system and were as follows:

The pericardium was filled with bright red blood, much of which was recently clotted, resulting in tamponade. An irregular laceration measuring 2.5 cm. in length was found on the anterior surface of the left ventricle near the apex and just to the left of the septum. The myocardium in this region was soft and thin and bulged outward. The myocardium measured 0.5 cm. in thickness in this region as compared to 2.4 cm. in the uninvolved areas. The apical half of the ventricular septum was opaque. The ventricles were moderately dilated. The anterior descending branch of the left coronary artery was completely occluded near its origin by an adherent thrombus, and there was a rather marked sclerosis and narrowing of the other arteries. The heart weighed 390 gms.

The kidneys were somewhat contracted and the surface was finely granular. The capsule stripped easily. Many stiff, gaping arteries pro-

truded from the cut surface at the corticomedullary junction. The cortex averaged 4 mm. in thickness.

The anatomic diagnosis summarized the findings as follows: Thrombosis of left descending coronary artery. Recent infarction of myocardium. Rupture of infarcted left ventricular wall. Intrapericardial hemorrhage. Coronary arteriosclerosis. Chronic interstitial arteriosclerotic nephritis. Generalized arteriosclerosis.

Microscopic examination of the kidney reveals a severe degree of involvement. The walls of the arterioles are greatly thickened. One such vessel is filled with fresh thrombus. The walls of the arterioles are thickened to an even greater relative degree than the larger arteries. In many, the lumen is reduced to very narrow caliber and in some it is obliterated. Scattered about in the cortex and usually radiating from involved arteries are irregular cellular areas composed of connective tissue richly infiltrated by lymphocytes. In such areas glomeruli and tubulaes have been replaced by the inflammatory tissue. Between such areas the glomeruli are somewhat distorted. Lobulation of the capillary tufts is not evident. The cells of the glomeruli are enlarged and vacuolated. In some glomeruli the capsule is moderately thickened. The tubules are dilated and contain granular material. Their epithelium is cloudy and finely granular.

DISCUSSION

The interesting feature of this case is the relatively slight symptomatology preceding the final fatal rupture of the wall of the left ventricle. The first symptom, precordial pain, which persisted and became progressively more severe, appeared seven days before the sudden termination. The systolic blood pressure of 180 suggested a not very severe lesion, yet the condition of the myocardium of the left ventricle and septum suggests that the coronary occlusion occurred at this time. The patient remained at work and even played a round of golf on the day preceding death. The electrocardiogram on the morning of this day revealed unmistakable evidence of myocardial infarction, with a drop in systolic blood pressure to 110. What the initial blood pressure was preceding the onset of the attack seven days preceding death is not known; the degree of renal involvement suggests a pressure higher than that of 180 systolic first determined. In discussion of this case, the cardiologist called attention to the relative frequency of silent coronary occlusion as determined by the electrocardiogram.

Rupture of the heart as a sequel of coronary occlusion and myocardial infarction occurs most often on the fifth to ninth day after occlusion, most frequently, as in this case, on the seventh day and usually in the wall of the left ventricle. Rupture is the result of necrosis and softening of the infarcted myocardium and occurs at the height of the degenerative and necrotic process. Rupture may be preceded by slight extra physical exertion, as in a patient in this hospital who left his bed against orders to go to the bathroom and died on the way thither.

Rupture of the heart with sudden death due to intrapericardial hemorrhage and tamponade, leaving out of consideration traumatic lesions of the heart, occurs most often as a sequel of coronary occlusion and myocardial infarction. But it is not always due to this cause. We recall the case of a man in his early thirties, an ex-football star who had reached the bond selling stage, who died suddenly while running for a train. Necropsy revealed a transverse rupture of the intrapericardial portion of the aorta, with intrapericardial hemorrhage. The aortic valve had only two cusps, an anomaly which had not interferred with the strenuous exertions of his college days. In another instance, fatal intrapericardial hemorrhage was due to rupture of an aneurysm of a sinus of Valsalva. A similar termination occurred in a man in whom a ruptured aneurysm of one sinus was associated with an unruptured aneurysm of a second sinus of Valsalva.

CASE 2 — CHRONIC BRONCHIESTASIS, MULTIPLE ABSCESSES OF LUNGS, EMPYEMA

This white, 56 year old male entered St. Francis Hospital on the 24th of March, complaining of a steady, dull, boring pain in the right chest posteriorly, which had started three months ago and which had become progressively more severe. He also admitted having had cough and dyspnea for one year and that these symptoms also had become more severe of late. The cough occured at night and in paroxysms lasting from one half to two hours. An episode of cough and dyspnea would last several weeks and then subside, only to reoccur. The pain in the chest dated back to January 15th, at which time the patient developed coryza which he was unable to "shake off" as usual. There had been a definite loss of weight since the onset of his pain, but the exact amount of weight loss could not be determined. Lately the cough has been troublesome during the day as well as at night. The past history is irrelevant.

Physical examination admission: The patient was poorly nourished and emaciated. The temperature was 101, the pulse 120, and respirations

32 per minute. The physical findings were negative except insofar as they related to the chest. The apex of the heart was shifted to the left; rhythm was regular and there were no murmurs. There was limited respiratory excursion of the right chest, increased resistance on palpation, flatness on percussion, and absence of breath sounds. Breath sounds were increased over the left chest, and there was resonance on percussion.

Laboratory findings on admission were as follows: Urine was negative for sugar, albumin, blood, and leukocytes. Blood examination revealed 4,500,000 erythrocytes; 43,000 leukocytes with 81% polymorphonuclear cells and a shift to the left; hemoglobin 12.5 gms. The sputum was negative for tubercle bacilli.

Roentgenologic examination on admission revealed the presence of a thickened pleura, partial collapse of the right lung, and multiple cavities with fluid levels throughout the right lung. Slight hydropneumothorax of the right chest was also reported. A bronchogenic carcinomatous lesion of the right lung was suspected.

Clinical Course: 3/25: A few cubic centimers of bloody purulent liquid were removed from the right chest. This yielded no growth on culture and smears were negative except for pus cells. On the following day 1800 cc. of clear, greenish, serous liquid was removed. This and subsequent drainage fluids yielded Strep. viridans on culture.

3/31. Rib resection done and drainage tube inserted. Started on a course of sulfathiazole, gr XV q 3h.

From this point on the patient did poorly and went gradually downward. On 4/10 a generalized maculo-papular eruption appeared which was attributed to sulfathiazole. The latter was discontinued. X-Ray at this time revealed little change from previous films.

4/21. Multiple sinuses reported in region of thoracotomy wound. Considerable drainage of malodorous pus from wound and sinuses now present.

N.P.N. 32; Urea N. 17.2; creatinine, 1; blood sugar 70 mgm %; serum albumen, 3.03 and serum globulin, 1.3 mgm %.

4/24. Pulmonary edema, sonorous rales, cyanosis, and dyspnea.

4/25. Expired.

Necropsy: The chief postmortem findings related to the lungs and were as follows:

The right lung weighed 800 gm. and occupied about one-third of the pleural cavity. The pleura was covered by a thick, fibrinous, partly organized exudate. There was marked resistance to section and the consistency was that of uncooked beef. Numerous dilated, thick-walled bronchi protruded from the cut surface and the latter was also marked by wide streaks of pale fibrous tissue. On pressure there appeared numerous small and large droplets of thick, grennish yellow pus on the cut surface. Many necrotic abscess cavities averaging 1.5 cm. in diameter were present on the cut surface.

The left lung was water-logged and in the upper posterior part of the lower lobe was an abscess measuring 3 cm. in diameter. The abscess had no definite limiting membrane. It was filled with thick, tenacious, grey pus. In the apical portion of the left lower lobe was a localized area of bronchiectasis similar to that of the right lung. From the sectioned bronchi pus could be expressed.

Microscopic examination of the right lung revealed dilatation of the bronchi of all orders. Smaller bronchi with no cartilage in their walls were relatively most dilated. Some were empty and lined by a single layer of columnar epithelium. Others of this size and those of larger size with cartilaginous walls weree filled with cellular exudate composed of polynuclear leukocytes and lymphocytes. The walls of the larger bronchi were thickened and fibrous. From them fibrous bands extended outward into the lung parenchyma. The latter was collapsed and the septa were thick. The bronchiectatic portion of the lower lobe of the left lung revealed similar changes.

The anatomic diagnosis summarized the findings as follows: Empyema of right pleural cavity. Postoperative pneumothorax. Multiple drainage sinuses of right chest. Chronic bronchiectasis of both lungs. Multiple abscesses of both lungs. Chronic pleuritis of right lung. Edema of left lung. Recent infarction of spleen. Edema of feet and ankles. Emaciation.

Summary: The course of events in this case appears to have been as follows: Bronchiectasis of at least a year's duration; multiple bronchiectatic and parenchymatous abscesses; rup-

ture of a subpleural abscess or dilated bronchiole into the right pleural cavity with empyema; sepsis. Whether earlier recognition of the underlying condition and more radical surgery at such time would have resulted in a more favorable outcome remains questionable.

CASES 3 AND 4 — ACUTE PANCREATIC NECROSIS

A 57 year old housewife entered the hospital on March 5, 1942 complaining of severe substernal, non-radiating pain of twenty-four hours duration. The onset of the pain was sudden and relief was not obtained by rest or taking soda. A hypodermic injection of morphine was required for relief of pain, but eight hours later the pain recurred with vomiting. Twenty-four hours after the onset of her present attack the pain gradually shifted to the right of the umbilicus and the vomiting continued. At this point she was admitted to the hospital with a diagnosis of appendicitis.

The temperature was 99, pulse 76, and respiratory rate 20. The patient was well developed and well nourished and appeared to be acutely ill. The skin was cold and moist and the blood pressure was 148/68. The mouth was edentulous and there was not adenopathy. The heart and lungs were not abnormal. Tenderness and spasm were marked in the right lower quadrant but a mass was not palpable.

Laboratory findings: W.B.C. 15,510: polymorphonuclear cells 80%, with many immature forms, Hb. 80%. Urine positive for acetone and diacetic acid, Sp. Gr. 1.030.

At operation the appendix was found to be pathologically negative. There was marked hemorrhage in the retrocecal tissues with extensive suffusions of blood in the subserosa of the ascending colon. The peritoneal cavity was filled with a serosanguinous fluid but the bowel appeared normal. Exploration after mobilization of the cecum failed to reveal the source of the hemorrhage. A drain was placed in the retrocecal area and the wound was closed. The immediate postoperative course was stormy and the patient went into shock from which she did not recover. Death occurred on the third postoperative day.

At the autopsy the hemorrhage found at operation could be traced to the pancreas, from which the blood had dissected its way between the layer

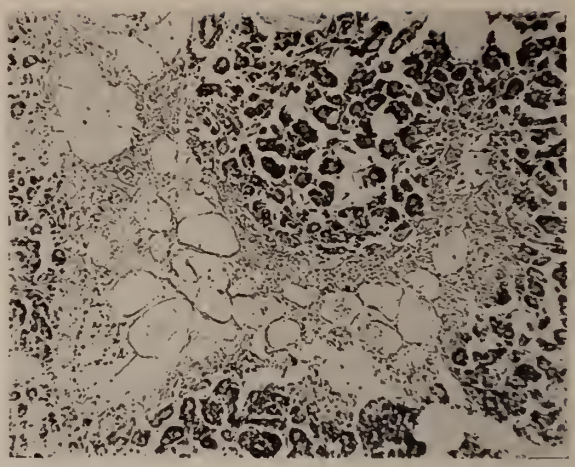


Figure 1. Case 3. Interlobular edema and necrosis of pancreas. X110.

of the mesentery to the ascending colon. The pancreas was swollen, but except for the massive hemorrage on the anterior surface it did not appear to be greatly altered. Two tiny yellow plaques were seen in the capsule of the pancreas, but other evidence of fat necrosis was lacking. Microscopically the pancreas revealed a few patchy areas of fat and parenchymal necrosis (Fig. 1). The gall bladder wall was sparsely infiltered with lymphocytes. There was no calculi in the biliary or pancreatic ducts, but the larger interlobular pancreatic ducts were grossly faintly bile stained.

The anatomic diagnosis summarized the essential postmortem findings as follows: Acute hemorrhagic pancreatic necrosis. Retroperitoneal hemorrhage. Serosanguinous peritoneal effusion. Chronic interstitial cholecystitis.

The second case is that of a 72 year old white female, who complained of nausea, vomiting, and pain in the right upper quadrant for the past three days. She had attacks similar to the present illness during the last four years, but never as severe as this one. Jaundice had never been present, and there was no bloody or light-colored stools until three days ago. At that time, following the sudden onset of pain, nausea, and vomiting, she first noticed that her stools were light-colored but formed. Dizziness and dyspnea on exertion had been present for several years, and currently she had been taking "much medication" for a bad heart. When seen at

home by her physician, examination revealed the presence of a mass in the upper abdomen which was tender and larger on the right, but extending horizontally across the abdomen. There was some rigidity in the upper right quadrant. Pain, although present, was not severe. On the following day the patient was admitted to the hospital, and the mass was now below the umbilicus.

On admission the patient appeared acutely ill and lethargic. The rectal temperature was 97.8, pulse 88, and respiratory rate 42. The blood pressure was 120/60 and the pulse was full and regular. The heart was regular and the tones were good. Rales were heard at both bases. In the lower abdomen was a tender, palpable mass which was slightly moveable. True rigidity or spasm was not present. The skin was pale and clear.

X-ray of the chest revealed the presence of poorly outlined areas of increased density in the lower left chest. The heart was slightly enlarged and the arch of the aorta was calcified.

Laboratory findings: The urine showed a heavy trace of albumen. RBC-5,000,000, Hb. 100%, WBC. 37,800 with 83% polymorphonuclear cells, of which 24% were stabs. NPN-27, creatinine 2, blood chlorides 390, CO_2 combining power 51. The stools were negative for occult blood.

Course: On the second hospital day auricular fibrillation developed and the patient went into a stupor, from which she was roused with difficulty. Incontinence of feces and urine developed on the third day. The temperature varied between 99 and 102, but on the fourth day began to level off at 99, and there was some general improvement. A slight icteric tinge of skin and sclerae was noticed. On the fifth day suppurative parotitis developed and the jaundice continued to deepen. On the sixth day the patient again became drowsy, and the icteric index was 40. The findings relative to the abdomen did not change appreciably. The chest became filled with sonorons and sibilant rales and her condition grew rapidly worse, death supervening on the ninth hospital day after an abrupt rise in temperature to 104.5. During her stay at the hospital pain was relieved by paregoric in one dram doses. No morphine was administered.

An autopsy was performed, and on opening the peritoneal cavity the parietal peritoneum and

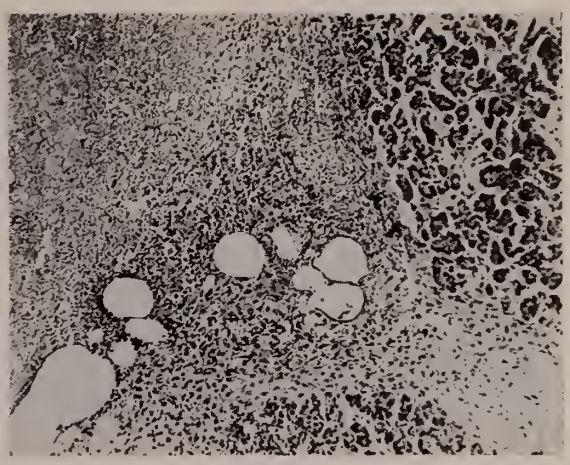


Figure 2, Case 4. Inter- and intra-lobular necrosis of pancreas. X110.

omentum were studded with tiny, yellow, opaque areas of fat necrosis. The pancreas was swollen and extensively hemorrhagic and necrotic, but there was no frank hemorrhage in the retroperitoneal tissues (Fig. 2). The gall bladder was filled with small spherical calculi, one of which was found in the common duct at the papilla of Vater. A confluent bronchopneumonic process was found in the left lung.

The anatomic diagnosis listed the main features as follows: Acute pancreatic necrosis. Fat necrosis. Occlusion of papilla of Vater by biliary calculus. Cholelithiasis. Confluent left bronchopneumonia. Jaundice.

DISCUSSION

The above two cases represent types of pancreatitis. In one case hemorrhage was the predominant manifestation, while in the other there were widespread areas of fat necrosis with relatively little hemorrhage. In both, however, the pathogenesis is probably the same.

Of late the tendency has been to classify pancreatitis as (1) acute, with or without fat necrosis; (2) acute, transient, or edematous pancreatitis without hemorrhage or necrosis; (3) chronic interstitial pancreatitis. The latter is often associated with fatty liver and sometimes interstitial nephritis. The majority of cases of the acute necrotizing type seldom have a history of previous attacks which might be interpreted as pancreatitis. On the other hand, recurrent episodes of epigastric pain, vomiting, and dyspepsia are not uncommon in those cases in which at autopsy one finds fibrosis and interstitial inflammation in the pancreas.

The incidence of cholelithiasis associated with acute pancreas necrosis has been variously estimated from 50 to 80 percent, and assumes importance as a prob-

able etiological factor. Studies on goats, dogs, and other animals have failed to produce clean cut evidence concerning the role of bile as an activator of trypsinogen, although both bile and duodenal contents have been shown to convert trysinogen to trypsin, the active digestant which presumably is responsible for the changes found in the pancreas in these cases. Polya considers the reflux of duodenal contents unlikely because of the acute angle at which the common bile duct enters the duodenum. Dragstedt maintains that infection is always present in pancreatitis as a result of infected bile entering the pancreatic ducts. Although organisms are seldom recovered, this is explained by assuming that any and all bacteria are digested first after the trypsin has begun to act. Acute pancreatitis is often associated with chronic alcoholism, acute infections (mumps in particular), cholecystitis, duodenal ulcers, pregnancy, and trauma. Many writers have included as etiological factors various toxic agents, vascular occlusion, and pressure on the pancreatic ducts as a result of inflammatory proliferation.

Acute pancreas necrosis still remains largely a surgical or autopsy diagnosis, being confused clinically with almost all acute intraabdominal surgical lesions any of which it may similate. For this reason many investigations are being carried out in an attempt to measure constant alterations in physiology or chemistry in this disease. The determination of serum amylase levels has been a major advance in this field, although there is still considerable lack of standardization of this procedure. As a result, some laboratories determine the amount of starch remaining after the hydrolysis of a standard solution (usually 1.5% starch paste), others determine the amount of reducing sugar formed by such a reaction, while other investigators have attempted to measure the reaction as a whole by using the viscosity of the reacting substances as a criterion for velocity of reaction. Each method has its critics and its advocates, and probably all methods are useful if used with proper controls. Many investigators have reported the serum amylase as being remarkably constant at all ages, even under extreme conditions of starvation, vitamin deficiency, and changes in diet. It is elevated in mumps and lowered in diseases of the liver. The amylase level of urine and duodenal contents is too fluctuant to be of value.

Regarding the treatment of this condition, the swing has been away from conservatism towards operation. However, most men with wide experience feel that a waiting period of two to five days before surgical intervention in cases of pancreas necrosis gives best results. Some prefer to drain only the gall bladder, while others have resorted to anterior and posterior drainage of the pancreas, or drainage of the common bile duct or peritoneal cavity. Later the gall bladder should be removed, unless there is danger of occlusion of the common bile duct as a result of scarring due to chronic pancreatitis, in which case the gall bladder could be used for cholecystjejunostomy or similar anastomosis.

The mortality in cases of acute edematous pancreatitis is almost negligible, no matter what form of therapy is used, while that of acute pancreatic necrosis is seldom less than forty percent, and usually is much higher. Surgery offers a slightly better prognosis if properly done and if the time of operation is chosen.

Tuberculosis in Your Community. One physician lives and works in a tuberculosis-saturated community, another in a community with a low incidence. One has a heavy practice among groups afflicted with high tuberculosis rates, another does not. One sees many patients from low economic brackets, another from the higher income brackets. One has patients coming to him from industries with more than a normal incidence of the disease, another sees only a few of them. How many physicians have informed themselves of the tuberculosis rate of their community? How many have analyzed the social and economic make-up of their own practice? How many, having done so, have considered their opportunity and obligation for watching for the particular tuberculosis hazards of their patient load? A. A. Playte, M. D. and Harold Holand. Journal-Lancet, Apr. 1942.

ADRENAL CORTEX EXTRACT IN THE TREATMENT OF BROMIDE ERUPTION AND BROMIDE INTOXICATION

Since bromide is retained in the system at the expense of chloride and as adrenal cortex extract forces a definite retention of sodium chloride it seemed logical to give adrenal cortex extract in the treatment of bromide retention.

Seven cases of bromide intoxication were treated with 6-10 Gms. of sodium chloride and 5 cc. of adrenal cortex extract daily. The average duration of mental symptoms was five and one half days. In 2 cases given chloride alone the average duration of mental symptoms was more than 15 days.

In 7 cases bromism was induced by giving 60 to 120 grains of bromide daily. When the serum bromides reached the toxic level (150 to 250 mg. per 100 cc. of serum) the patients were divided and 4 given chloride and adrenal cortex extract and 3 given chloride alone. Treatment consisted of 10 Gm. of sodium chloride by mouth plus 5 cc. of adrenal cortex extract intramuscularly daily in the first group and 10 Gm. of chloride by mouth daily in the second group. The patients given the adrenal cortex extract showed a much more rapid fall in serum bromide than those receiving chloride alone. Two of the patients developed a bromide eruption. Two others during treatment with chloride alone developed rather marked edema of the feet and ankles. They were given sodium bicarbonate with prompt relief.—*C. P. Boudurant, M. D., and C. Campbell, M. D., Journal of the American Medical Association, January 11, 116:100-104, 1941.*

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

On June 19th, Edwards County Medical Society honored Doctor H. L. Schafer of West Salem and Doctor J. L. McCormick of Bone Gap on completion of fifty years in the practice of medicine. Doctor Andy Hall of Mt. Vernon was present and presented these two doctors with the 50 year medal of the Illinois State Medical Society.

At its recent meeting in Atlantic City, the American Association for the Study of Allergy elected Samuel M. Feinberg of Chicago as President.

Loyal Davis, Chairman of the Surgical Department of Northwestern University Medical School, has been elected President of the University's Alumni Association.

At the annual meeting of the Chicago Urological Society the following officers were elected: President, Leander W. Riba; Vice-President, Charles G. Weller; Secretary and Treasurer, Irving J. Shapiro.

At the annual meeting of the Chicago Gynecological Society held June, 1942 the following officers were elected: President, Edward Allen; President-Elect, George H. Gardner; Vice-President, William T. Carlisle; Treasurer, Ralph A. Reis; Secretary, Eugene A. Edwards; Pathologist, William H. Browne; Editor, Garwood Richardson.

CHICAGO BRANCH OF STATE HEALTH LABORATORY OPEN 8:30 A.M. TO 11:00 P.M.

Beginning July 1, 1942, the hours of laboratory service at the Chicago Branch Laboratory, Illinois Department of Public Health, 1800 W. Fillmore St., will be from 8:30 A.M. to 11:00 P.M. only. For some six months this laboratory has received no requests for *emergency* laboratory service after 11:00 P.M.

DEATHS

Emil Bernard Anderson, Chicago; University of Illinois College of Medicine, 1903. Gynecologist and obstetrician at Englewood Hospital and a member of the staff for many years. Died June 2, 1942, aged 65 years.

George W. Billig, Chicago; University of Illinois College of Medicine, 1901. Member of the staff of the Swedish Covenant Hospital and consulting staff of Illinois Masonic Hospital. Died June 7, 1942 at the age of 65.

M. Philip Cannon, Chicago; Chicago College of Medicine and Surgery, 1916. Member of the Drexel Park Presbyterian Church board of deacons and its first president. Died June 2, 1942 in Ocala, Florida at the age of 64.

Samuel W. Chavis, Chicago; Leonard Medical School, Raleigh, N. C., 1911. Died of a heart attack June 2, 1942, aged 55.

Seymour J. Cohen, Chicago; Rush Medical College, 1919. Attending physician Michael Reese Dispensary since 1927; secretary of the Chicago Tuberculosis Society. Died June 11, 1942 at the age of 45.

Edson Brady Fowler, Evanston; Northwestern University Medical School, 1896. Served in the World War as chief orthopedic surgeon at Camp Shelby and

Ft. Sheridan. Fellow of the American College of Surgeons, former president of St. Francis Hospital, fellow of the Institute of Traumatic Surgery, member of the American Academy of Orthopedic Surgery, the Chicago Orthopedic Society, and a 32nd degree Mason. Died June 22, 1942 at the age of 77 years.

William T. Gilman, Chicago; Hahnemann Medical College and Hospital, 1895. Retired a few years ago. Died June 10, 1942 at the age of 81.

Henry Wallace Grote, Bloomington: Rush Medical College 1894. Founder and first president of the Central Illinois Radiological Society. Charter member of the Radiological Society of North America and the American Roentgen Ray Society. Director for many years of the Roentgen Laboratory at Brokaw Hospital in Bloomington. Died June 20, 1942, aged 73 years.

Maurice Lewison, Chicago; Northwestern University Medical School, 1906. Professor of Physical Diagnosis, University of Illinois College of Medicine; attending physician Mt. Sinai Hospital; consulting physician Cook County Hospital. Fellow of the American College of Physicians and a diplomate of the American Board of Internal Medicine. Senior author of "Manual of Physical Diagnosis" published in 1941. Died June 17, 1942 at the age of 56 years.

Dwight C. Phillips, Chicago; University of Illinois College of Physicians and Surgeons, 1895. Served as a captain in the World War with Base Hospital 120. Practiced medicine in Chicago for 47 years; died June 15, 1942 at the age of 69 years.

Julia C. Strawn, Chicago; University of Illinois College of Physicians and Surgeons, 1903. Formerly, Head, Gynecological Department of Hahnemann Medical College and Chicago Memorial Hospital for 25 years. Fellow of the American College of Surgeons. Died May 31, 1942 at the age of 73 years.

Max S. Wien, Chicago; Rush Medical College, 1919. Associate professor of dermatology, University of Illinois College of Medicine; Professor of dermatology, Cook County Graduate School of Medicine. Former president of the Chicago Dermatological society; author of numerous scientific articles. Died June 23, 1942 at the age of 47 years.

Thos. Albert Bryan, Mattoon; University of Illinois College of Medicine, 1903. Practiced medicine and surgery in Mattoon for 35 years. Died June 16, 1942 at the age of 63.

Bryant H. Trewyn, Peoria; St. Louis University School of Medicine, 1925. Had practiced medicine in Peoria since 1926; staff of St. Francis Hospital, Peoria for 15 years; president of the Peoria Board of education. Died suddenly June 9, 1942, aged 42 years.

James Frederick Williams, Joliet; Meharry Medical College, 1903. Had practiced medicine in Joliet for 25 years. Died May 30, 1942, aged 62.

THE TREATMENT OF PYOGENICALLY INFECTED WOUNDS BY THE TOPICAL APPLICATION OF POWDERED SULFANILAMIDE AND SULFANILAMIDE-ALLANTOIN OINTMENT

A study of 140 cases of pyogenic wounds with mixed infections, reveals that sulfanilamide acts locally by inhibiting the growth of the organisms. A single application of the drug is not sufficient to prevent a revival of growth, but repeated daily doses cause a rapid decline in the bacterial activity. A continuous high concentration of the drug, however, has a deleterious effect on normal cellular activity. Adequate control of infection without undue inhibition of wound healing has been accomplished with gratifying results by the following technic: The wounds first receive a careful and complete debridement. This step is important for the drug must come into actual contact with the bacteria. After the wound has been thus prepared, a sufficient amount of sulfanilamide powder is instilled to cover the diseased tissue completely. The amount of sulfanilamide necessary depends upon the area of the lesion: in many cases 7 to 15 grams have been used in a single application. A sterile gauze dressing is then applied. This process is repeated daily until the purulent exudate ceases and the infection is under control. This usually requires from 4 to 6 days. A sulfanilamide-allantoin ointment is then substituted for the pure sulfanilamide in order to stimulate the growth of granulation tissue. The formula for an effective ointment is as follows:

Sulfanilamide	10%
Allantoin	2%
Chlorobutanol	0.5%
Greasless base of glycerinated stearic acid with triethanolamine	qs.

The ointment is spread over the entire infected area and covered with gauze or oil silk. These dressings are changed daily. The infection remains under control and normal healing processes are quickly reestablished.—*J. R. Veal, M.D., and R. G. Klepser, M.D., Medical Annals of the District of Columbia, February, 10: 61-65, 1941.*

They are telling the one about the rookie who was getting his first taste of paratrooping. "Now when you jump," said the instructor, "count ten and then pull this cord to open your chute. If it doesn't open, count ten again and pull this one. That one always opens. No matter where you land there will be a station wagon to pick you up and bring you back." And so they pushed him out of the plane and he pulled the first cord, but it didn't work. He counted ten again and pulled the other cord, and that didn't open. As he lost another two thousand feet, the rookie groaned: "I'll bet that station wagon won't be there either!"

—*Walter Winchell.*



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VITAMIN B COMPLEX

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	MINIMAL REQUIREMENTS	BIOLAC FEEDINGS
PROTEIN (gms./lb. body weight)	1.4 to 1.8*	2.2†
CALCIUM (gms./day)	1.0*	1.0
IRON (mgms./100 calories)	0.75	1.25
VITAMIN A (U.S.P. Units/day)	1500.	2500.
VITAMIN B_1 (U.S.P. Units/day)	83.	85.
VITAMIN B_2 (mgms./day)	0.5	2.
VITAMIN D (U.S.P. Units 100 calories)	50.	63.

*The Food & Drug Administration has not promulgated minimum requirements for protein and calcium in infancy. The values shown are those recommended by the National Nutrition Conference.

†When Biolac formulas are fed in the amount of 2½ fl. oz./lb. body weight.

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Book Reviews

Genital Functions and Their Hormonal Regulation. Bernhard Zondek. Cloth. Price, $4.50 Pg. 264. Baltimore: The Williams & Wilkins Company, 1941.

This deals largely with experimental investigations of the genital functions. The clinical material occupies a comparatively small part of it. Some of the experimental work confirms conclusions already drawn by other authors. In some instances the author seems somewhat less critical than American writers in drawing conclusions from his experiments. He uses some new terms which tend to further complicate the already confused terminology of this subject. Some excellent work is recorded to disprove the idea that estrogenic preparations cause carcinoma in the human female. He feels equally certain that the pituitary does not regulate the growth of malignancies. Each chapter is briefly summarized. This makes for quick and easy reading and reference. The book is well written, attractive, and men interested in the experimental phases of this subject will find it worthwhile.

Management of the Sick Infant and Child, Sixth Revised Edition, By Langley Porter, M.D., Dean Emeritus of the University of California Medical School, and William E. Carter. M.D., Director of the University of California Hospital, Out-Pateint Department. Price $11.50. 977 Pages with 96 illustrations and 6 charts. St. Louis, C. V. Mosby Company, 1942.

This is the sixth edition of a well-known pediatric work which, because of its format and style of presentation and the fact that it is contained in one volume, makes it a valuable compendium of information for instant reference. The type is easy to read, important words are printed in black-face, and there is a suitable index.

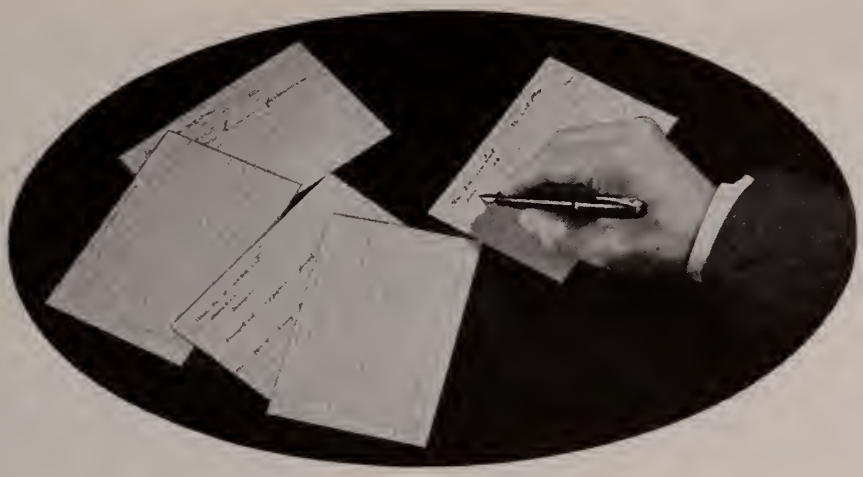
The book is divided into three parts for better classification and presentation of the material. Part I considers the usual problems, its nutrition, feeding difficulties and other conditions peculiar to that most important phase of life. The chapter on prematurity seems a bit academic in tone and certainly lays undue stress on the use of vitamin K.

Part II is concerned with various diseases and disorders of the infant and child and includes discussions of behavior problems and of allergy. The chapter on behavior is a bland discourse on the normal development of the child mind with casual reference to a few of the commoner difficulties such as anorexia and sleeplessness. Rightly it avoids delving into deep psychological fields, and with only slight revision would make an excellent lecture for the laity. The Chapter on allergy is disappointingly brief but its honesty is self evident. Too often lately have we been seeing a strange nybrid, the pedistrician-allergist. It is to be regretted that the Kenny treatment of acute poliomyelitis is not descibed in detail instead of being passed over in a single sentence.

Part III describes in detail useful methods of procedure in dealing with sick children. Many of the procedures described are suitable for the instruction of nurses as well as internes but the pediatrician should be familiar with all of them. The discussion of x-ray examination is excellent. The chapter on formulas and recipes is detailed enough to satisfy the most exacting although there is nothing particularly now. The chapter on the use of the sulphonamide drugs is thorough and lends itself well to practical application. The last chapter in the book is a well-presented resume of the treatment of various sorts of poisonings. Its tabulated form lends itself to ready reference and many physicians will no doubt find it expedient to post a copy in the poison antidote cabinets of their hospitals.

The Blood Bank and the Technique and Therapeutics of Transfusions. By Robert A. Kilduffe, M.D., Director, Laboratories, Atlantic City Hospital; and Michael DeBakey,

(Continued on page 30)



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* * *

**J.A.M.A., 93:1110—October 12, 1929*
Brückner, H.—Die Biochemie des Tabaks, 1936

***The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941*

****ibid. p. 5*

● SEND FOR REPRINT of an important contribution to medical literature—"The Cigarette, The Soldier, and The Physician," The Military Surgeon, July, 1941—revealing many new angles about smoking. Write Camel Cigarettes, Medical Relations Division, 1 Pershing Square, New York City.

Camel— *The Cigarette of Costlier Tobaccos*

BOOK REVIEWS (Continued)

M.D., assistant professor of surgery, School of Medicine, Tulane University of Louisiana. The C. V. Mosby Company, St. Louis, 1942. Price $7.50.

This book came off the press at an opportune time when our country is entering a major war and when we are more and more conscious of the advantages of blood transfusions. It could not have been more timely.

The historical sketch is very interesting to many students of medicine. The authors deal with the indications, with the military aspects, with the technique of typing and selecting donors, all problems that are of interest to everyone in the practice of medicine. The chapters on the storing of blood in various forms are well discussed. They do not neglect the various problems of whole blood and blood plasma and they give in a very readable manner the various techniques of giving blood.

Last but not least they give a very complete bibliography which must have represented a lot of conscientious work on their part. I feel that this book is very concise and stimulating and I have nothing but the highest praise for it.

Eye Manifestations of Internal Diseases, I. S. Tassman, M. D. The C. V. Mosby Company, St. Louis. Price $9.50.

This is an excellent book for student, specialist and those in the general practice of medicine.

It supplies a long felt need for more emphasis on the relation of general diseases to the eye and the relation of the eye to general diseases, it broadens the view of the specialist and the general practitioner alike.

The first five chapters are devoted more to fundamentals and are of value to the student and those without a wide experience in ophthalmology.

The subsequent chapters offer an excellent description of the effect of general diseases on the eye. They are adequate but not boresome. This book is valuable to both the student and the practitioner.

WHEN TO CLEAN THE TEETH

For maximum effectiveness, teeth should be brushed directly after meals, *Hygeia, The Health Magazine* points out. Scientific reports indicate that the conversion of refined carbohydrates to acids through action of bacteria in the mouth may be surprisingly rapid. These acids are responsible for the initial phase of tooth decay. Certain soft deposits which later harden to form the substance known as calculus also are more easily removed directly after meals than at a later time.

DOCTOR DEBUNKS COMMON BELIEF ABOUT THE SOURCE OF IMPETIGO

Eruption Of The Skin Disease On A Newborn Infant Does Not Indicate Carelessness Of Hospital Staff, Physician Says

The presence of impetigo, an inflammatory skin disease, does not indicate carelessness on the part of physicians or nurses on the hospital staff as is commonly believed, William C. Danforth, M.D., Evanston, Ill., declares in an article, appearing in the May issue of *Hygeia, The Health Magazine,* explaining why the newborn infant sometimes has lesions of impetigo.

Impetigo, which is characterized by isolated pustules (small elevations of the outer layer of the skin filled with pus) is caused by bactria—the staphylococci—which are found in the skin and body orifices at all times, he says.

"When an eruption of impetigo appears on a newborn baby," the physician points out, "it usually comes soon after birth—in fact many babies are born with the spots already on their bodies! In such instances staphylococci circulating in the mother's blood have passed through the placenta (organ within the womb which establishes communication between mother and child by means of the umbilical cord) into the circulation of the baby, attacking the baby's skin before birth. It is known that bacteria can pass through the placenta from the mother's into the baby's circulation, because babies have been born with the rash of measles or smallpox—when the mothers were suffering from those diseases. It has also been known for years that the organism which causes syphilis may pass from the mother to the infant. Thus when staphylococci enter the bloodstream of the baby from that of the mother they are doing what a number of other germs are demonstrably able to do.

"Actually, it is impossible for a baby to pass from the interior of the uterus (womb) to the outer world without being in contact with bacteria. The birth canal itself always contains a number of different bacteria. Attempts to render the birth canal entirely bacteria-free through use of chemical antiseptics are often dangerous; experience has shown that for the safety of the mother it is wiser to rely on the natural resis-

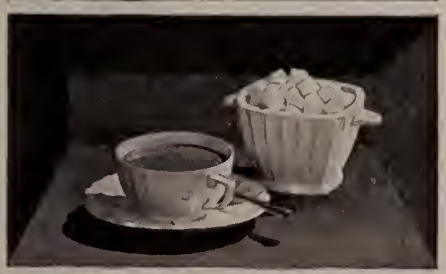
(Continued on page 32)

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tance of the mother's organism. Hence the infant is exposed for a time to contact with bacteria—the staphylococcus among others, even during the most normal and smoothly progressing labors. The possibility of infection is always present, and the possibility of impetigo in the baby is as great when birth occurs at home as it is in hospital deliveries. . . . An occasional case of impetigo is bound to occur, no matter what precautions are taken, and this is in no way the fault of the attending physicians, or the fault of the nurses, or the fault of the hospital. . . ."

Dr. Danforth points out that as soon as impetigo is detected on the body of a baby in a nursery hospital, he is taken away from the other infants and placed in isolation. Since the disease is highly contagious, every precaution is taken to prevent its spread to other infants.

REPORTS SURGICAL EXPERIENCE AT PEARL HARBOR ON DECEMBER 7

Surgeon Says Postoperative Mortality Rate Was Only 3.8 Per Cent in a Large Group of Seriously Wounded Victims

A postoperative mortality rate of 3.8 per cent among a very large number of seriously wounded victims of the Pearl Harbor attack on December 7 who were treated in a military hospital is reported in *The Journal of the American Medical Association* for February 28 by John J. Moorhead, M.D., New York. The publication of his paper has been authorized by the Office of the Surgeon General of the United States Army.

"The results," he declares, "were better than I had ever seen during nineteen months in France when serving with the French, Belgian and American medical formations."

Dr. Moorhead explains that "I had arrived in Honolulu on December 3 at the invitation of the Honolulu Medical Society to give a course of lectures on 'Traumatic Surgery.' By a strange coincidence the second lecture was entitled 'Treatment of Wounds, Civil and Military,' and this was given on Friday night, December 5, approximately thirty-six hours before the attack. An audience of about three hundred at-

tended, and a large proportion represented the Army and Navy medical personnel."

He says that in his lecture he discussed principles of treatment which were based on experience in World War I and also in civil practice. "No one then thought that these principles of treatment were so soon to be put to a large scale test in a proving ground only a short distance from the lecture platform," he observes.

"When we began work on the morning of the attack there was the inevitable confusion caused by the influx of a large number of casualties, but very soon eight operating teams were on duty and most of us operated continuously for eleven hours. We were relieved by another group, and by this time a six hour shift was started; later this became a four hour tour. Most of the operations were performed by the civilian surgeons at the onset, as the regular hospital personnel were engaged in the essentially important triage (sorting), shock ward work and treating the walking wounded so that they might be discharged to duty. I was restored to temporary active duty in the Army Medical Corps as Colonel, Surgical Consultant, soon after the attack began. . . ."

The casualties were numerous, varied and severe. The majority were the result of bombing or machine gun attack. The embedded foreign bodies were of variable size and depth. Indwelling foreign bodies were not searched for unless accessible, but subsequently were sought and in many instances successfully removed. Of particular interest is Dr. Moorhead's report that in 2 cases in which a machine gun bullet had lodged within the spinal canal the bullets were successfully removed.

"In 1 of these I would have failed had it not been for the aid afforded by the 'locator.' This is an electromagnetic induction apparatus about the size of a portable radio and it functions after the manner of a detector of buried metals. It was developed for me by a very clever technician of the New York City Transit System, and I gave it a successful trial at the Reconstruction Hospital Unit of the New York Post-Graduate Hospital just before leaving for Honolulu. This initial demonstration was in the case of a police officer who had been in the bombing incident at the New York World's Fair in July 1939. At this first test of the 'locator' I was able to locate and remove several small metallic fragments from the region of the ankle, and pur-

(Continued on page 34)

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YEAR 'ROUND USE of NUPERCAINAL* for speedy mitigation of pain and itching includes conditions such as mild burns, dry eczema, decubitus, intertrigo, fissured nipples, etc. Your pharmacist can supply NUPERCAINAL in one-ounce tubes and from one-pound jars.

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PEARL HARBOR (Continued)

posly the x-ray films were not used as additional guides. This apparatus is highly sensitive for fragments of iron, steel, brass and copper, as well as for silver and aluminum, and less so for lead. It indicates the foreign body on the surface by a dial and also registers the subsurface depth almost equally well. The wandlike finder or probe can be sterilized and introduced into the wound if necessary. It was by this last named application that I found the aforementioned intraspinal bullet.

"On two successive days during a calm period we gave this apparatus a very severe test in our hospital group, and it proved helpful in 22 cases in which operations were performed by the chief of the surgical service and his assistants. The original apparatus is in Honolulu, but another even more responsive has been tested, and soon the device will be available commercially. . . ."

In summarizing his report Dr. Moorhead says that most of the fatalities in the cases treated in the military hospital in which he operated were those suffering from internal abdominal wounds and those depleted by shock and hemorrhage. There were no deaths from gas gangrene and discharge of pus from the wounds was almost absent, "so much so," he says, "that it became a subject of universal comment. There were no cases of tetanus, local or general, and the state of well being of the wounded was exceptional after the first few days.

"On January 3 in a San Francisco hospital I visited a large group of wounded we had evacuated on Christmas day, and they were all doing exceedingly well. Their condition elicited a special report to headquarters. Hence the follow-up is sufficiently prolonged to permit evaluation of the end results."

Dr. Moorhead believes that the outcome of the cases was dependent on:

"(a) Early receipt of the wounded — within the 'golden period' of six hours.

"(b) Preliminary shock treatment.

"(c) Adequate débridement (removal of all foreign matter and excision of the tissues immediately surrounding the wound) with no primary suturing.

"(d) Use of sulfonamide drugs in the wound and by mouth.

"(e) Adequate after-care.

"Other factors which aided were:

"(a) Absence of puttees; the incidence of driven-in dirty apparel was thereby lessened.

"(b) Climatic conditions.

"(c) Early hour of the attack; Sunday morning, and the men were clean and were not war worn.

"(d) Few flies.

"Our greatest defect was inability to give better preoperative shock treatment to a larger number of the seriously wounded.

"The outstanding features in this initial outbreak of World War II were the morale of the wounded, the unusual skill of the surgeons and the devoted service of the nursing and other hospital personnel.

"It is a duty and a proud privilege to pay tribute to those who served, and no directing surgeon ever had better cooperation."

WARNS OF DANGERS IN SPEEDING UP PRODUCTION OF PHYSICIANS

A. M. A. Journal Says Any Extensive Efforts To Increase Number Graduated Each Year Will Lower Professional Standards

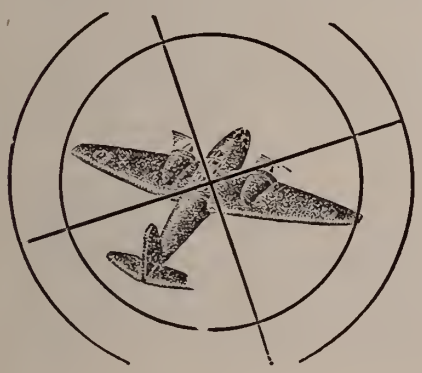
Any extensive efforts to increase the number of physicians graduated each year, as has been proposed in some quarters, will mean a lowering of professional standards and the ultimate effect will be serious both on the army medical services and on service to the people, *The Journal of the American Medical Association* for January 17 warns. *The Journal* says:

"Already several medical schools have announced the readjustment of their curriculum so that the sessions will be practically continuous, in order to speed production of physicians and possibly also to increase the total number of physicians graduating each year. For more than twenty years the medical schools of this country have accepted each year slightly over six thousand students. Each year a certain percentage of these students have been dropped from the schools because of poor scholarship or for other reasons; the total number of medical graduates has been approximately five thousand three hundred annually. More than twelve thousand

graduates of colleges and some with just two or three years of college education apply each year for entrance into the medical schools. Selections are made with the greatest of care. Since a considerable percentage of those selected are still found to be unable to complete the course because of poor scholarship, many educators have been convinced that six thousand students represent all of the really well qualified candidates for the medical profession that become available. Thus the proposal to increase greatly the number of young men admitted to medical school or to modify the curriculum has caused great concern to leaders in medical education and medical practice. For more than thirty years the struggle to develop a high standard of medical education and to maintain that standard has been a difficult but a successful one. Without a doubt the standards of medical education in the United States are superior to those anywhere else in the world. The quality of medical service available to the public of the United States is as good as can be found anywhere else in the world. No doubt, distribution of practice may be improved — but that is another question!

"The Council on Medical Education and Hospitals of the American Medical Association is, of course, anxious to do everything that can be done to provide a sufficient number of well qualified physicians for the armed forces and for the civilian needs. Nevertheless, familiarity with the physical assets and faculties of the medical schools of the United States causes the Council to have some doubts as to whether every medical school in the country is capable of undertaking an increase in the number of students admitted and of embarking on a continuous session of study and yet maintaining the standards of medical education that the Council has set forth as a minimum. These considerations must not be overlooked. Perhaps the impulsive action taken by the Committee on Medical Preparedness of the Association of American Medical Colleges, presumably as a defense measure, was somewhat too sudden. Perhaps the Health and Medical Committee should have given consideration to this matter. Indeed, there does not yet appear to have been issued from the Health and Medical

(Continued on page 36)



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Medical Director

SPEED-UP (Continued)

Committee or any other official agency any statement to the effect that it has given such approval.

"As one leading educator said, 'I feel that those responsible have not thought the proposal through.' Here are some of the difficulties that do not yet seem to have been solved:

"1. If the young men entering medical schools in June 1942 complete the course in thirty-six consecutive months they will be graduated in June 1945 instead of June 1946. However, they will still require a year of internship, thus making them unavailable for military service until the end of June 1946. As an emergency measure the immediate gain is slight.

"2. Many students have been accustomed to utilize the summer vacations to earn funds to finance their medical course. If summer vacations are to be eliminated, these students either will have to be financed from some other source or discontinue their medical education.

"3. Many medical students enrolled in the Reserve Officers Training Corps are under obligation to serve a period of training in the field. This must be discontinued if the medical curriculum is to occupy thirty-six consecutive months.

"4. If some students follow the thirty-six consecutive month concept and others try to continue the original plan of four years of nine months each, the physical facilities and the technical and teaching staffs will have to be greatly increased or devote far more time than is now given.

"5. Unless colleges, universities and hospitals have their curriculums suitably integrated with the curriculums of the medical schools, the students will lose from three to six months spent waiting for entrance into medical courses or to internships in hospitals somewhere along the line.

"These are a few of the problems that have been raised and for which solutions do not yet appear to be fully available. Most important, however, is the question of maintaining accepted medical standards. If more students are admitted and a larger percentage fails, little useful



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POINTS TO BRIGHTENING OUTLOOK FOR SUFFERERS FROM ALLERGY

While As Yet There Is No Permanent Cure, Much Has Been Learned Recently About Providing Relief, Physician Explains

While as yet there is no permanent cure for allergic conditions, recent experiments and clinical observations have done much to alleviate the suffering of many who are susceptible, Bret Ratner, M. D., New York, declares in the May issue of *Hygeia, The Health Magazine.*

Discussing the symptoms of allergy, Dr. Ratner says that "People who have allergy manifest their symptoms in one or more of several ways. They may have hay fever, which produces symptoms referable to the nose and eyes. They may have asthma, which presents symptoms of suffocation due to a spasm of the muscles suurounding the air tubes or small bronchi. They may have eczema, a chronic skin condition which presents a great variety of lesions, or urticaria, more commonly known as hives. A variety of gastrointestinal (stomach and intestines) disturbances may result from hypersensitiveness. . . . Even migraine and temporary paralysis and blindness have been attributed to this malady.

"It may seem strange that such a wide variety of conditions should be included under the one disease entity, allergy. The explanation is rather simple, perhaps too simple to be complete, but our knowledge has not progressed beyond this point. The tissues which appear to become sensitized are the smooth muscle cells which make up the involuntary muscle found in the lung tubes,

(Continued on page 38)

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ALLERGY (Continued)

in the blood vessels of the skin, in the mucous membranes of the nose and eyes and in the intestinal tract. The symptoms a patient presents, therefore, will depend on the smooth muscle or tissue sensitized. . . ."

It cannot be definitely stated, Dr. Ratner explains, whether all or only certain persons are subject to sensitization. "Certain investigators," he says, "believe that heredity plays a major role. It is granted that human beings possess certain constitutional characteristics which may play a role in the ease with which allergy is acquired, but so far, these characteristics are not known. Children without any family history may develop allergy, and parents suffering from allergy may produce normal offspring. . . . It has been granted that while a particular allergic manifestation is not heritable, the capacity to become sensitized is. The child of an asthmatic parent does not necessarily have asthma, but he may have hay fever or eczema.

"The belief has been expressed that allergy is acquired in much the same way as infectious diseases. There may be certain constitutional factors which make one person more susceptible than another. There are, moreover, conditions which render tissues more susceptible to the invasion of and sensitization to foreign proteins. It is known that membranes are highly permeable in early infancy; this is a period when the organism is being introduced to all new foods and other environmental substances. Another period of danger is during convalescence from disease. . . ."

The treatment is at times as dramatic as the disease itself, the author observes, and quite often one who is sensitive will be free of all symptoms through the simple expedient of removing the offending substance. The treatment of food sensitivity consists of a meticulous removal from the diet of all foods which contain the offending substance. Once the offending food is discovered and eliminated from the diet, a tolerance can be built up by giving the food involved in small amounts, which are gradually increased.

"A remarkable physicochemical fact," he says, "is that food which is harmful in a raw state may be tolerated when it is thoroughly cooked. Thus a person sensitive to egg may react to a coddled egg as well as to a raw one, yet he may be able to eat a hard boiled egg. The milk sensi-

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tive patient can tolerate milk boiled for half an hour, or evaporated milk, and the person who is allergic to wheat, meat or vegetables in like manner can tolerate these foods when thoroughly cooked. Doctors are endeavoring to establish an immunity, or tolerance, to pollens by inoculating hay fever patients at regular intervals throughout the year."

CHEMISTRY OF ANTICONVULSANT DRUGS

Speculation as to the mechanism of convulsive attacks has been common since the dawn of scientific medicine. Epilepsy is a disorder without apparent demonstrable structural abnormality, which implies a chemical basis for the disease. This conception has received recent statistical confirmation.

It appears that cortical rhythm is normally stabilized by endogenous metabolites and that paroxysmal cortical dysrhythmias of epilepsy are dependent on a deficiency of such metabolites or an abnormal response to them.

There is reason to believe that both the "physiologic" anticonvulsants, such as dextrose, carbon dioxide, pyruvic acid and aceto-acetic acid and the synthetic anticonvulsants produce their effect by giving rise to an acid milieu within or about the nerve cells.

The synthetic anticonvulsants, now a large and fairly distinctive group, are predominantly of a composition which suggests that they are broken down by cellular activity — perhaps chiefly in the brain — giving rise to stable products, such as benzoic acid. Their anticonvulsant activity has been shown to be entirely independent of any hypnotic activity. It is suggested that the use of anticonvulsants in the treatment of epilepsy may be regarded as a substitution therapy. Sodium Diphenyl Hydantoinate, the only one of the new synthetic anticonvulsants so far introduced into clinical practice appears superior to phenobarbital, formerly the standard.—*Tracy J. Putnam, M.D. and H. Houston Merritt, M.D., Archives of Neurology and Psychiatry, March, 45: 505-516, 1941.*

There is a story of the famous Dr. Routh, President of Magdalen College, Oxford, in the 18th and 19th centuries. It seems that during a party a certain Don fell from a window and so died. The senior member present was deputed to acquaint the President with the sad tidings. "President," he said, "I have to tell you that last night one of our number was accidentally killed." The President showed little if any emotion. With some diffidence the Don continued, "President, he fell from a window, and I fear I must tell you that he was at the time, tipsy." This aroused the great man's interest. "Stop," he said, "don't tell me who it was — don't tell me — let me guess."—*John Taylor, M.D., Medical Press and Circular, May 28, 1941.*

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THE U. S. PHYSICIAN POPULATION INCREASED ABOUT 1,900 IN 1941

Annual Report On Medical Licensure Reveals 5,681 Additions To Profession Last Year; Deaths Total About 3,700 Annually

There were 5,681 additions to the medical profession in the United States, its territories and possessions in 1941, the Council on Medical Education and Hospitals of the American Medical Association reports in its fortieth annual compilation of medical licensure and allied statistics, published in the May 9 issue of *The Journal* of the Association. "The number removed by death annually approximates 3,700," the report says. "It would appear that the physician population in 1941 was increased therefore by about 1,900. While it cannot be said that all of those licensed are in practice, it may be assumed that the great majority are."

The report explains that the figures represent candidates examined in 1941 and licensed in the United States and its territories and possessions, also those examined in previous years whose licenses were withheld for lack of internship, citizenship and other technicalities and issued last year, and those without a state license who were during the year certified on the basis of the certificate of the National Board of Medical Examiners, the government services, Canadian and foreign credentials. In the main they represent recent graduates.

"The greatest number in any one state were added in New York, 993, and 449 in Illinois," the report says. "More than 300 received their first license in California and Pennsylvania. The states of Indiana, Louisiana, Maryland, Minnesota, Missouri, New Jersey, Tennessee, Texas, Virginia and Wisconsin increased their population of physicians by between 100 and 201. Thirty-one states, the District of Columbia, Alaska, Hawaii, Puerto Rico and the Virgin Islands added fewer than 100. Of the licentiates constituting additions to the medical profession last year, 5,213 secured their licenses after examination and 468 by endorsement of credentials."

Commenting on this aspect of the annual report on medical licensure, *The Journal* says that "Of these 5,681 newly licensed physicians, 626 were graduates of foreign medical schools

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and 226 were graduates of unapproved medical colleges in the United States. During 1941, 4,738 graduates of approved medical colleges were added to the profession in the United States. Accumulated data indicate that during the past seven years there have been 41,983 new additions to the profession.

"As a result of increases in the number of students admitted and the adaption of an accelerated curriculum by most of the medical colleges, the annual additions to the profession from the medical schools of this country should increase by more than 25 per cent during the next few years."

According to the report, the greatest increase in physician population, according to geographic division, was 1,554 in the middle Atlantic states. The East North Central group added 1,183, the South Atlantic 622, the West North Central 608, the Pacific group 440, the New England states 418, the West South Central group 415 and the Mountain states 91. Nineteen were added in Hawaii, 11 in Puerto Rico and 2 each in Alaska and the Virgin Islands.

The report says that the number of living physicians in the United States in 1941 was approximately 180,871.

Regarding the accelerated program of medical schools, the report says that "As a war measure, programs have been initiated to increase the supply of physicians for the Army, Navy and civilian population by the adoption of an accelerated program of medical education by the various medical schools of the country."

Forty-nine medical schools have adopted an accelerated curriculum involving both the acceptance of entering students and the graduation of a class every nine months. Eleven have adopted an accelerated curriculum involving the graduation of a class every nine months but will admit an entering class on an annual basis. One school will continue operating the four quarter plan, admitting new students and graduating a class every quarter. Eight schools have not adopted an accelerated program.

"As has been pointed out," the report says, "there are many difficulties involved in the acceleration of the program, and where a school

(Continued on page 43)

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PHYSICIAN POPULATION (Continued)

has failed to adopt such a program in order to maintain satisfactory standards it is to be commended rather than criticized.

"The acceleration of the training of medical students to the end that graduation will occur following three calendar years of instruction raises questions concerning medical licensure that demand consideration along with a consideration of the merits of the proposal itself.

"The medical practice acts of the several states define the standards that a medical school must maintain in order that graduates may qualify for licensure. If those standards are defined in such a way that courses of study must be given in four different calendar years, the obvious result will be that graduates after the abbreviated course will be disqualified for licensure unless the standards are reset by amendatory legislation."

The report says that "Within the next few months an attempt will be made to develop a fairly accurate approximation of the number of trained personnel to be secured by this process of speeding the production of physicians and to ascertain whether the number of physicians so trained will be adequate to supply the anticipated needs of the military and civilian population for new gradautes during the next few years."

REPORT SULFADIAZINE IS EFFECTIVE FOR INFLUENZAL MENINGITIS

Complete recovery of 5 of 7 children under 4 years of age from the highly fatal condition, influenzal meningitis, by treatment with sulfadiazine a member of the sulfanilamide family of drugs, is reported in *The Journal of the American Medical Association* for May 23 by Wallace Sako, M.D.; Chester A. Stewart, M.D., and Joel Fleet, M.D., New Orleans.

Influenzal meningitis is an inflammation of the membrane enveloping the brain and spinal cord caused by the bacteria, Hemophilus influenzae, formerly thought to be the primary cause of influenza but now generally accepted as a secondary invader in complicated cases of influenza which in itself is caused by a virus.

One of the 7 children treated apparently died from a surgical procedure rather than the meningeal infection, the authors say, and the other child died after premature stopping of the sul-

(Continued on page 44)

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MENINGITIS (Continued)

fadiazine treatment and the contraction of chickenpox.

The three physicians say that "Various reports have emanated from Charity Hospital (New Orleans) reviewing the cases of influenzal meningitis. Tripoli in 1936 stated that 20 cases of influenzal meningitis seen from 1925 to 1934 were all fatal. Aleman in 1940 reported that from 1935 to 1939 inclusive 27 cases were treated with no recoveries. Bryan and Musser in 1941 remarked that for the past five years there had been 57 cases of influenzal meningitis treated with two recoveries. Forty-five of these cases occurred in children under 3 years of age with one recovery, this being in an infant 11 months old. . . .

"These reports reveal how gloomy the outlook for influenzal meningitis may be. . . . As far as we are aware there are no reports in the literature relative to the use of sulfadiazine in influenzal meningitis. . . ."

LISTS TEN AIDS BELIEVED TO BE USEFUL IN REALIZING RELAXATION

A. M. A. Journal Editorial Also Discusses The Important Relationship Between Ability To Relax And Longevity

Ten "tricks" which are believed to be useful in realizing relaxation are presented in *The Journal of the American Medical Association* for February 14 in an editorial which points out the importance of relaxation in relationship to longevity. *The Journal* says:

" 'If we could learn how to balance rest against effort, calmness against strain, quiet against turmoil,' says Dr. Josephine Rathbone, 'we would assure ourselves of joy in living and psychophysical health for life.' The psychologists believe that people who live dynamically without being too tense have four main attributes: first, rhythm in their activities with great swings in output and accomplishment, alternating with periods of repose; second, a sense of values which makes it possible to minimize effort and minimize strain; third, ability to reduce muscular tension in any part of the body consciously whenever desired, and, fourth, a readiness to fall asleep at will.

"While these attributes may develop spontaneously to some extent in some persons, it is also possible to cultivate them in a measure. In order to aid such cultivation, ten tricks are presented which are believed to be useful in realizing relaxation. They are:

"1. Cut down on the intensity of your thinking half an hour before retiring. (Play Chinese checkers, plan an excursion for the week end, write a letter to a friend, fill with pleasant things you have been doing.)

"2. Take plenty of time to get ready for bed (next morning's clothes, leisurely bath, and so on).

"3. If you like to read in bed choose nonfiction or a 'hard' book. Force your mind to grapple with cumbersome facts, bore it into unconditional surrender to sleep.

"4. Transplant your mind from fears or hates to a field which has interest without excitement (a new wardrobe, possibly).

"5. Make your mind hop from one idea to another. Just as the mind loses consciousness and sleep comes, thoughts become disjointed and scattered. (Start with some happy episode in childhood, for example.)

"6. To quiet the body, get rid of any pressure or pain. (Lighten weight of covers, clothes.)

"7. Tepid bath without a rubdown. (Get into bed a little damp and chilly. As the body becomes warmed it becomes more and more comfortable. If during the night one becomes sleepless, throw back covers until the body becomes uncomfortably chilly. Then when the covers are pulled up again, the body once more sinks into coziness.)

"8. Imitate the slow, deep rhythmic breathing of sleep. (Helps regulate the circulation and may ease the mind and emotions; also tensions in the abdomen.)

"9. Relax the muscles completely.

"10. Get rested before trying to sleep. (Get into bed an hour or more before your regular time for retiring. Do so night after night to build up a reserve of rest and fall asleep without the old struggle.)

"The balance between what can be accomplished by education and practice and what is innate in producing relaxation and longevity is a delicate one. Physicians have long known that people with a low blood pressure, a low basal metabolic rate, a low pulse rate and a low intake of food—if all of these are not too low—tend to live longer than those in whom these physical factors are at extremely high levels. Perhaps equally important is a low threshold for the sense of humor—a mental attitude which does not take life too seriously."

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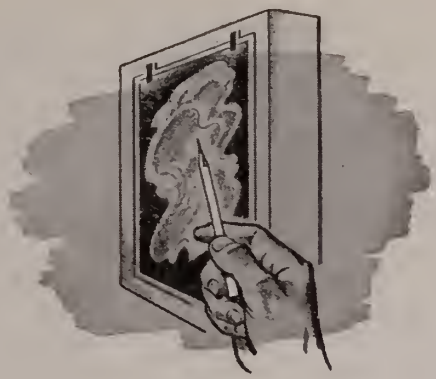
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*J. M. Soc. New Jersey, 36, 442 (July) 1939.

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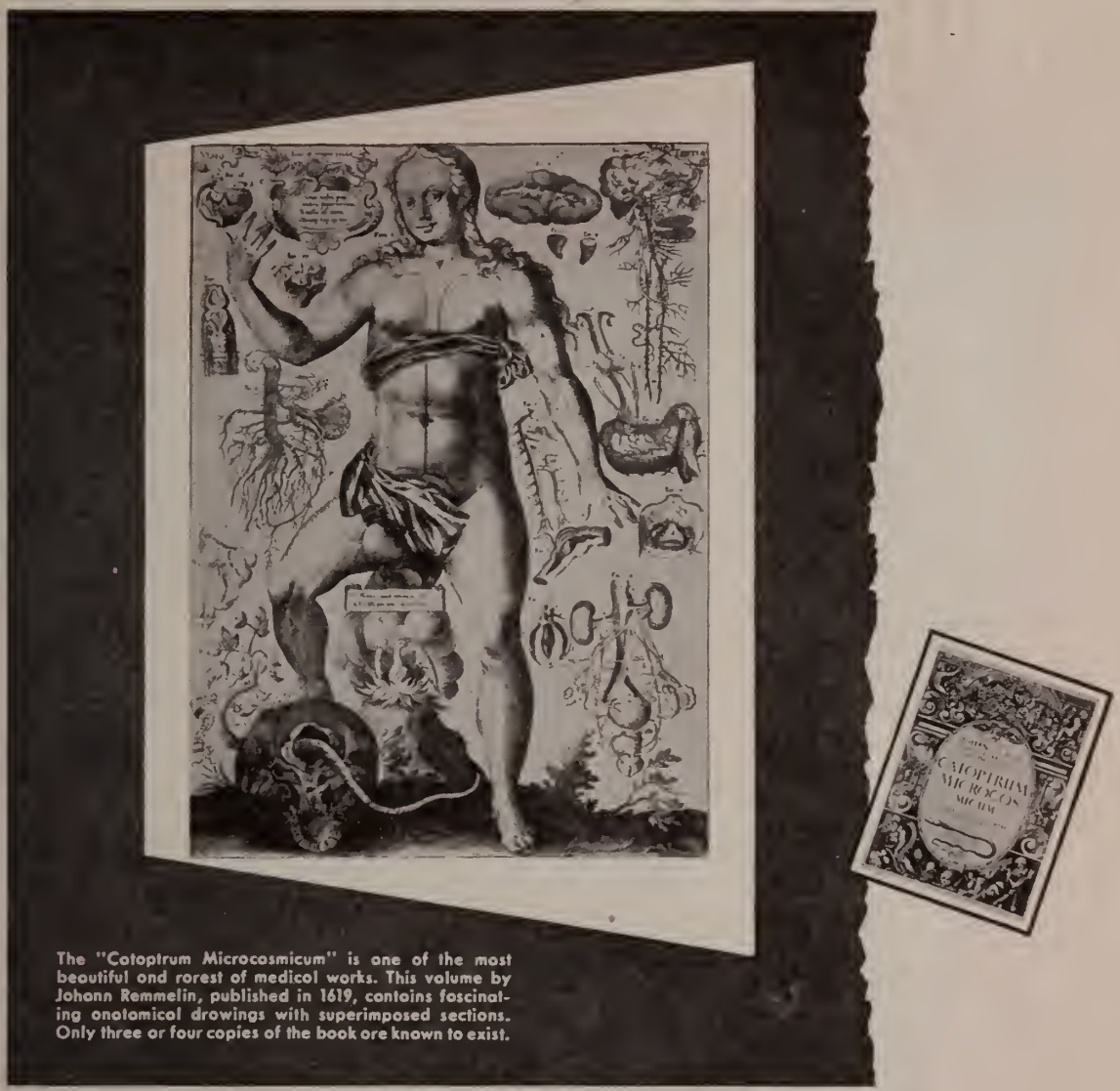
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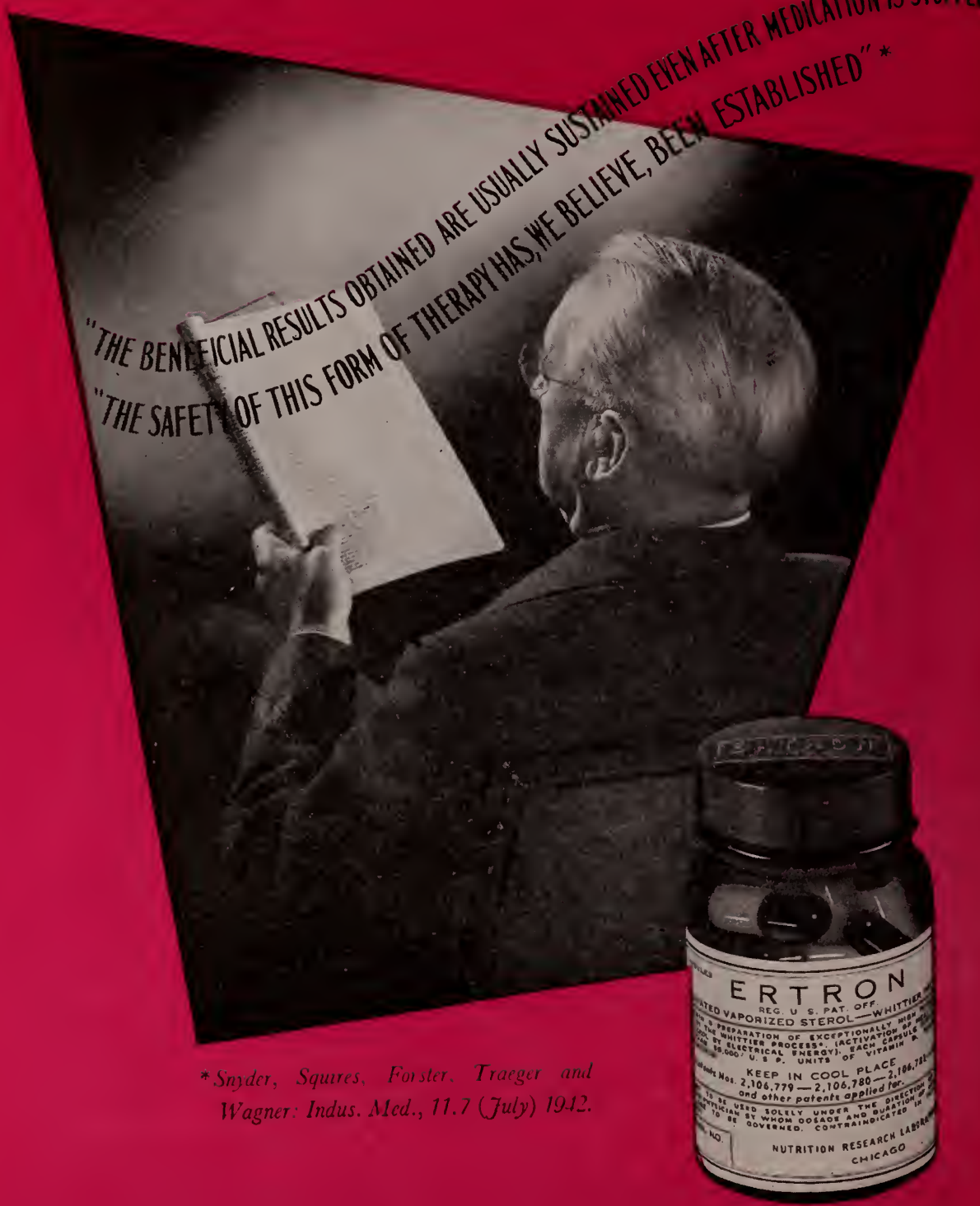
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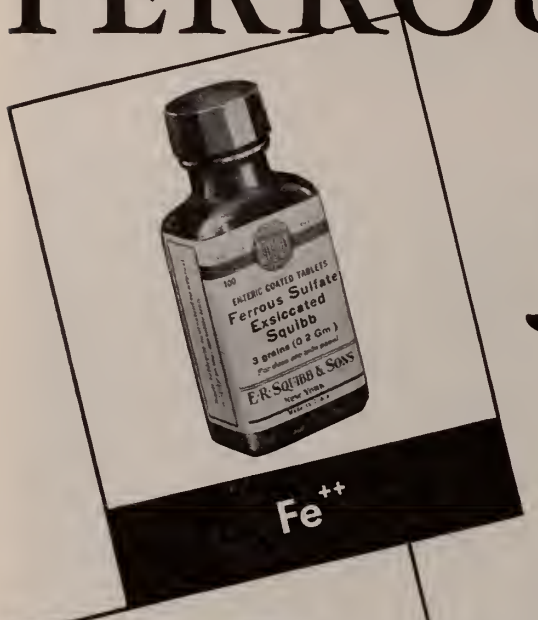
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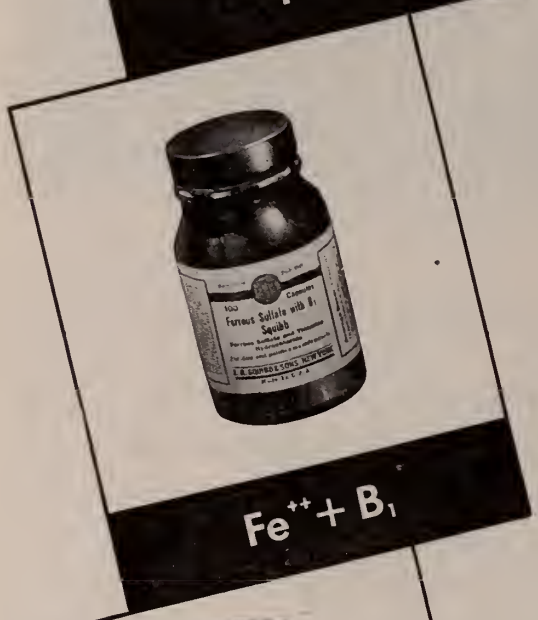
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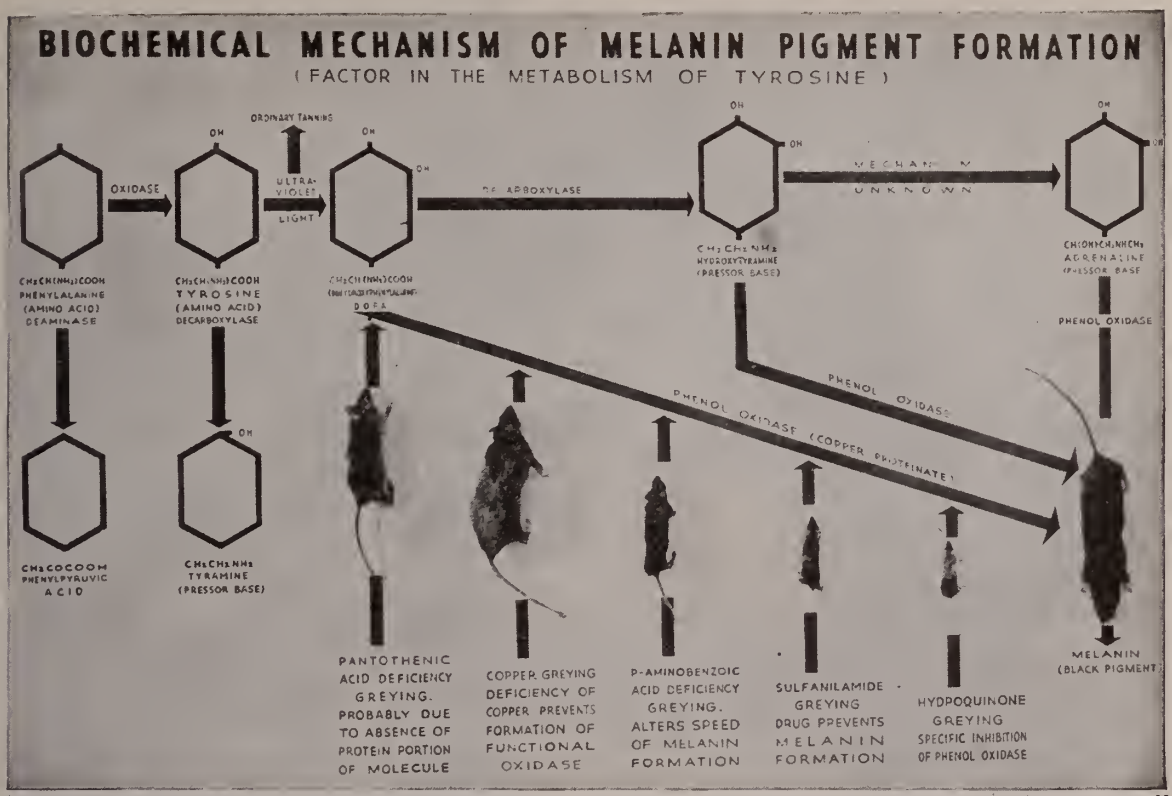


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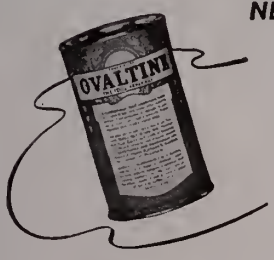
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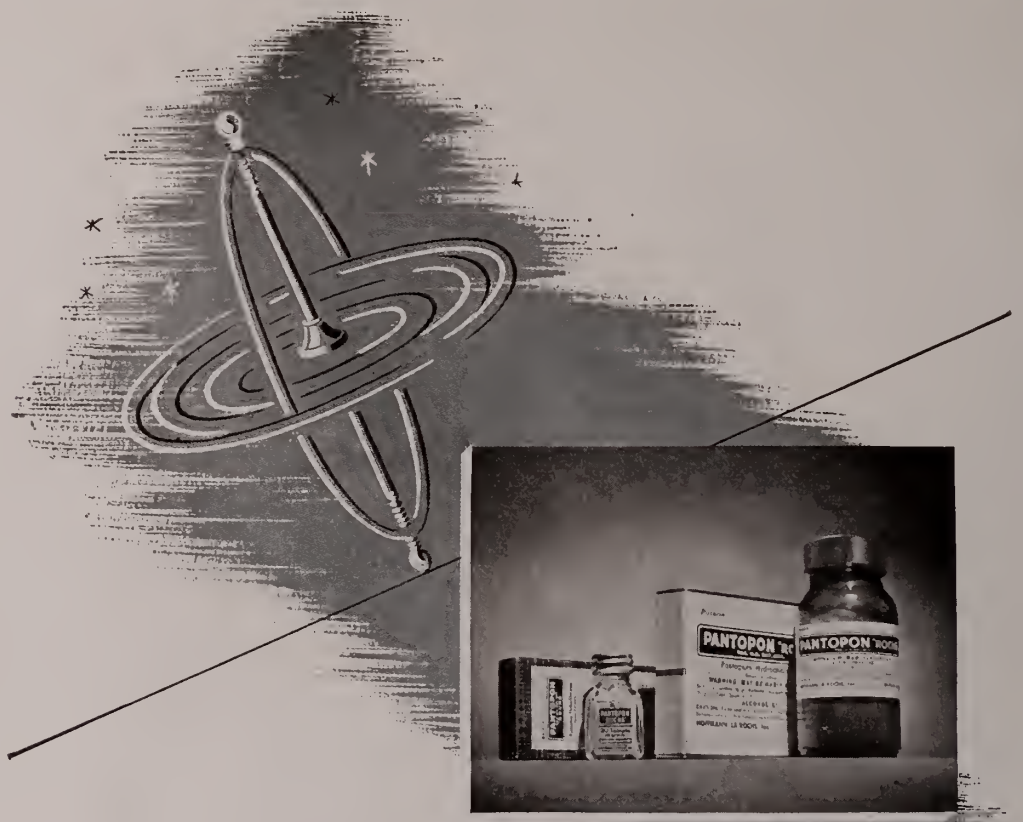
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The Illinois Medical Journal

August, 1942

VOL. 82, NO. 2

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

"WHO IS ESSENTIAL?"

During the past eight months many physicians have been called to enter the service of our government in this greatest emergency in the history of our country. Many hundreds of Illinois physicians are in service at this time and hundreds more from this state must join the medical corps of the Army or Navy before the end of the present year.

We have been informed that eight states must furnish approximately 80% of the desired medical personnel. The quota for Illinois, one of these eight states, is necessarily high with some 12,200 licensed physicians within the state. The present call is principally for physicians under the age of 45, although some men between the ages of 45 and 55 have been commissioned during recent months. It has been stated frequently that by the end of the present year most of the physically fit physicians of the country under 45 will be in service.

Illinois has four Class A medical schools which must continue to graduate physicians each year. There must be retained in these schools many teachers of recognized ability and some of these on the essential lists, must be under the age of 45. Each of these schools has submitted a list of instructors with statements as to availability or essentiality regarding each. Many of the younger men on the staff rolls of these educational institutions, although formerly considered as essential, have been made available for commissions in the medical corps.

A number of teachers of recognized ability, although considered essential by their respective deans, have insisted that they be released and permitted to enter service. In quite a few instances these requests have been granted.

Especially in larger communities there are a few specialists in certain fields who cannot at the moment, be replaced. These men have been declared essential for perhaps a period of from three to six months.

Likewise in smaller towns with only one physician within draft age, it has been decided that this physician should be declared essential for a few months pending replacement. It may not be possible to leave a physician in every small town, especially where there are other physicians nearby who can give the desired adequate civilian medical care for the duration.

Many industrial concerns have a well organized medical staff to care for employees. In many instances the companies are doing some type of war work. It may not be possible to permit the maintenance of the entire medical personnel of these institutions, although efforts are being made to keep some physicians in their present positions at least until replacements can be made.

There will no doubt be a shortage of physicians in many Illinois communities, yet the

minimum requirement is one physician to each 1,500 inhabitants. There was a situation called to the attention of the Procurement and Assignment Service recently where one county in this state had only eight able bodied physicians to care for more than 20,000 people. It was deemed advisable to recommend that all these physicians for the present at least, be declared essential.

We are informed that in the near future a roster will be prepared of physicians who are either too old for military service or who have been rejected for military service, and are willing to go into a community to take the place of the younger physicians who have joined medical corps. Lists are to be made of physicians who have had industrial training and who can be used in the care of defense workers to release the younger men.

This is an excellent opportunity for women physicians to go into some of these communities needing physicians, and also for interns and residents who have been rejected for military medical service.

Hospitals in Illinois, as elsewhere, are cooperating with the government at this time in reducing their lists of residents and likewise cutting down on their staff memberships to permit younger physicians to enter the medical corps. Long term residencies are being discouraged as a whole, even though the completion of another year or two as a resident may be sufficient to permit approval by one of the National Boards.

Many physicians, formerly residents but now in service, have stated that the services in their present position are equal to if not superior to those in their former capacities. Clinical groups have curtailed their staffs, and in many instances 50% or more of the former staff personnel is now in service. The head of an Illinois clinical group stated recently that he is willing to eliminate the vacations, forget the half day off each week and work a little longer each day during the present emergency, as more than half his group have all ready been commissioned.

Yet it is doubtful if working seven days each

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with no time off is best for the busy physician, who after all does need some rest and relaxation. In some communities where physicians formerly took a certain afternoon off each week, two half days have been selected with a certain group of physicians taking one of these days off, and the others taking the second half day for their relaxation and rest.

It is quite important that physicians today take better care of themselves. As they recommend to their patients, they too should have an occasional periodic examination to see that they are keeping physically fit. A physician-aviator recently stated that he greatly appreciated the opportunity of having his annual physical examination for the renewal of his pilot's license, as otherwise he, like too many others in the medical profession, would not have any physical checkup.

It is quite obvious that during the present emergency, greater responsibilities must fall on the shoulders of the older physicians. Some men who have been practically retired will no doubt assume greater obligations and enlarge their field of usefulness. Many city physicians may be requested to become country practitioners for after all, the real shortage of physicians will be found in the more sparsely settled and rural areas.

Greater demands are being made each month on the physicians of this country. It is the firm belief of those responsible for the operation of the Procurement and Assignment Service that within the coming months, the demands of the government will be cared for completely.

THE HEALTH OF THE ARMY

A recent release from the War Department stated that the health of the army is excellent. During the past winter months there were no serious outbreaks of respiratory infections, and compared with the previous winter there was a reduction of 52% for all diseases, and 70% for respiratory diseases. It was reported that in the late spring and early summer months there were numerous admissions to the hospitals on account of jaundice which apparently was the condition commonly known as catarrhal jaundice or epidemic hepatitis.

The efficient health corps in the armed forces are giving this and all other disease conditions the most careful study and attention. This applies to the soldiers moved into new areas as climatic changes occasionally cause a slight increase in hospitalization during the period of acclimatization.

The medical profession is able to offer more to the armed forces today than during the past war on account of the many recent developments in all branches of medicine. Every soldier is given a small supply of sulfanilimide with instructions as to its use. With the daily increase in the knowledge concerning the uses of "sulfa" group of drugs, hospitalizations are correspondingly decreased.

The intraperitoneal and intravenous methods of administration of these new drugs has been of great advantage in decreasing mortality from many types of infections. The recently developed method of immunization against tetanus will no doubt add much to the protection of the health of the armed forces. Comparatively recent improvements in bone surgery, treatment of osteomyelitis and care of fractures has likewise reduced the hospitalization period and increased the liklihood of complete restoration of function of these parts.

The modern treatment of soft tissue injuries as compared with methods of a quarter of a century ago are worthy of comment at this time. The increased use of soap and water, debridement and modern aftercare greatly reduce the dangers of wound suppuration and the dreaded complications such as tetanus, gangrene, etc.

Burns today are treated in a different manner than that used during World War I. Head injuries are given greater consideration than ever before, and fractures, infections and other injuries to the head cause less permanent damage than those of a few years ago. Bone transplants frequently restore to usefulness, parts which formerly would have been hopelessly disabled.

With the modern treatment of pneumonia and other respiratory tract diseases, there should be fewer complications from these infections as well as a marked reduction in their mortality. Preserved blood and plasma are made available everywhere the troops are sent, and with present day technique in administration, these valuable preparations can be given almost anywhere in complete safety.

The services of research organizations throughout the country are made available to the armed forces, and it is quite likely that within the next year, many additional developments will be added to the long list of recent years and will provide more to protect the health interests of our men in uniform.

It has been stated that the health of the American army is best of all armed forces, and with the thousands of physicians now in service and many additional thousands to be added during the coming months, there is every reason to believe that the U. S. Army will receive the best medical care to be found in the field.

TELLS OF SIMPLE WAY TO TREAT NAIL PUNCTURE WOUNDS OF FOOT

Method Described By Navy Surgeon Avoids Probing, Laying Open, Drainage And The Injection Of An Antiseptic Solution

A simple plan of treatment for nail puncture wounds of the foot is described in *The Journal of the American Medical Association* for May 30 by Fred H. Bowen, M. D., Lieutenant (j. g.), U. S. Naval Reserve, New River, N. C., who says that a total of 661 such wounds were treated by the method with no deaths or tetanus.

Pointing out that there is a wide diversity of opinion in medical literature concerning the proper treatment of such wounds of the foot, Dr. Bowen says that "most authors advocate probing the wound, laying it open, injecting an antiseptic solution . . . and instituting some form of drainage. It is my opinion that such treatment is unnecessary, painful and harmful and that it is followed by prolonged disability and at times by a painful . . . scar. Foreign bodies are not often carried deeply into the foot by a nail but they lie in the dermis (skin) or just beneath it. . . ."

He says that he has demonstrated that nails (6 to 20 penny) are wiped clean in the first ¼ inch of the wound.

In dealing with cases of nail puncture wounds incurred by laborers in the construction of the United States Naval Air Station at Jacksonville, Fla., he says, the following simple plan of treatment was used: The foot was soaked for fifteen to thirty minutes in hot water to which liniment of soft soap or a small quantity of a solution of cresol was added. The foot was dried carefully, and an area about 2 to 3 inches in diameter around the wound was painted with tincture of mercresin. The top layer of the skin was cut away around the wound. This exposed the foreign matter (usually sand, rarely particles of sock, leather, rust, rubber or concrete), which could then be easily removed. A dry dressing was applied, and 1,500 units of tetanus antitoxin was given. If the wound was caused by a nail larger than a 10 penny, the patient was told not to work for at least one or two days, but if a nail of lesser diameter was involved he returned at once to work.

STUDY OF BURNS IMPORTANT IN WARTIME

"The study of burns is of especial importance in time of war," Henry N. Harkins, M.D., Detroit, says in *The Journal of the Americal Medical Association* for May 30, pointing out that "It is reported that 60 per cent of the casualties at Pearl Harbor were burns. The treatment of war burns requires an adequate knowledge of the management of peacetime injuries coupled with an understanding of several of the distinguishing features of wartime burns. The present conflict has produced several unusual injuries not previously seen in large numbers, e. g., the "airman's burn," the phosphorus burn and the burn contaminated by oil and sea water. . . ."

The so-called airman's burn, he says, is especially prevalent in this war. When an explosion occurs in an airplane, the aviator throws up his hands to protect his face, burning the backs of the hands as well as the face. Such burns are often deep and involve a considerable amount of convalescent care to prevent bad scarring.

The phosphorus burns are especially apt to occur from incendiary bombs and self-igniting phosphorus grenades. Because small particles tend to become embedded under the skin, these injuries are apt to be deep. It is advised that such burns should be immersed and the phosphorused particles picked out under water.

Dr. Harkins says that general treatment of burns should be carefully coordinated with local treatment. The former should be promptly carried out and should include measures directed against shock, toxemia (poisoning of the blood stream from bacterial products formed at the source of an infection) and infection. Specific remedies include plasma (the liquid portion of the blood), dextrose solution, blood by transfusion, possibly adrenal cortex extract, and sulfonamides.

1st Draftee—"What did the little rabbit say as he ran out of the forest fire?"

2nd Same—"Hooray, I've been defurred."—*Old Maid.*

Correspondence

EIGHTH ANNUAL MEETING MISSISSIPPI VALLEY MEDICAL SOCIETY

The Eighth Annual Meeting of the Mississippi Valley Medical Society, "The Mid-West's Greatest Intensive Post-Graduate Assembly for General Practitioners" will be held in the Hotel Lincoln-Douglas, Quincy, Ill., Sept. 30, Oct. 1, 2. The program will be given by 25 clinician-teachers who will give over 40 lectures, demonstrations, instructional courses, etc. On Sept. 30 there will be a series of instructional courses by Kansas City clinicians and a complimentary Stag supper. On Oct. 1, a group of well-known Chicago teachers will have charge. A special Physicians' Sports Event program will be featured on this date with prizes for golf, skeet, bowling, archery and horse-shoes. The Banquet will be addressed by Dr. Edward H. Cary, of Dallas, Texas, Past President of the American Medical Association, and the Presidents of the Illinois, Iowa and Missouri State Medical Societies. There will be numerous technical and scientific exhibits. Every ethical physician is cordially invited to attend and no registration fee will be charged physicians in the uniform of the armed forces of the United States. The complete program appears in the September issue of MISSISSIPPI VALLEY MEDICAL JOURNAL, and further information may be secured from the Secretary, Harold Swanberg, M. D., W. C. U. Building, Quincy, Ill.

CANCER PROGRAM ENDANGERED

Alarmed by the fact that the armed forces are rapidly siphoning off the doctors especially trained to diagnose and to treat cancer, which is the second highest cause of death in the United States, the American Society for the Control of Cancer is asking Paul V. McNutt, Federal Security Administrator, to "consider prompt investigation and effective action to prevent what may turn out to be a major public health disaster."

Dr. C. C. Little, Managing Director, transmitted the Society's viewpoint to Mr. McNutt in the following letter:

"Our suggestion is that steps should be taken before the ranks of cancer workers are further depleted by their entrance into the Army or Navy, to 'freeze' a number of these men in positions where they can continue to fight this disease. Certain diseases can temporarily be merged in the war program without undue handicap due to our knowledge concerning them. This is not true of cancer. If the men trained to diagnose and treat cancer, and to date largely concerned with it, are all of them taken into the armed forces, the program against the disease will be set back for some ten to twenty years. For this reason, and because cancer kills approximately 158,000 Americans each year, we thought you would be willing to consider prompt investigation and effective action to prevent what may turn out to be a major public health disaster."

THE AMERICAN CONGRESS OF PHYSICAL THERAPY

Will hold its twenty-first annual scientific and clinical session September 9, 10, 11 and 12, 1942 inclusive, at the Hotel William Penn, Pittsburgh, Pa. The annual instruction course will

be held from 8:00 to 10:30 a.m., and from 1:00 to 2 p.m. during the days of September 9, 10 and 11 and will include a round table discussion group from 9:00 to 10:30 a.m., Thursday, September 10. The scientific and clinical sessions will be given on the remaining portions of these days and Saturday morning. A new feature will be an hour demonstration showing technic from 5:00 to 6:00 p. m. during the days of September 9, 10 and 11. All of these sessions and the seminar will be open to the members of the regular medical profession and their qualified aids. For information concerning the seminar and program of the convention proper, address the American Congress of Physical Therapy, 30 North Michigan Avenue, Chicago, Illinois.

ILLINOIS STATE HEADQUARTERS SELECTIVE SERVICE SYSTEM

Dwight H. Green, Governor
Paul G. Armstrong, Director

War Department Circular 147, dated May 16, 1942, follows, in part, and is submitted for your information:

"6a. An Officer of the Army of the United States must at the time of appointment be a citizen of the United States or of the Philippine Islands, or an alien of a co-belligerent or friendly country who otherwise possesses the same qualifications as a citizen of the United States, and between the ages of 18 and 60 years."

Very truly yours,
For the Director
E. Mann Hartlett
Major, M. C.
State Medical Officer

STATE-SPONSORED ILLINOIS CONFERENCE ON PUBLIC HEALTH AND UNOFFICIAL ILLINOIS PUBLIC HEALTH ASSOCIATION

All interested lay and professional Illinois public health workers are invited to attend the annual *Illinois Conference on Public Health,* sponsored by the Illinois Department of Public Health, which will this year be held at 2:30 P. M. on Monday, October 26, in St. Louis, as a joint meeting with the voluntary Illinois Public Health Association. Scheduled as a pre-convention session the day before the opening of the American Public Health Association's annual meeting in St. Louis, the program of the Illinois session will include important talks by Dr. Roland R. Cross, State Director of Public Health, Dr. Henry F. Vaughan, Head, School of Public Health, University of Michigan, and Dr. Huntington Williams, Professor of Hygiene and Public Health, Baltimore City Health Department.

Following this session there will be a special wartime business meeting of the Illinois Public Health Association, with a dinner at 6:30 P.M.

POWER-DIVES ANALYZED

The spiral nose-dive is perhaps the aviatory maneuver for which the advice based on physiologic understanding is of most practical use for the air-force men, because the rotation-speed is so increased that repeatedly there occurs a vertigo which may be very dangerous to the flying man. The rotation in a spiral nose-dive takes place in a horizontally situated frontal plane, as on the revolving-chair if the examined person puts his head on his knees. At the end of the nose-dive the craft is levelled off and the plane of the consequent vertigo is frontal but vertical. Now a fall-reaction will occur in the direction of the just completed rotation. When a pilot comes from a right-hand nose-dive, having sat upright throughout, he will have the tendency to fall to his right side since he has the sensation of turning in a frontal plane to the left, and in reacting to this feeling there is great risk of his making the same movement with his joy-stick and thereby putting his craft again into a right-hand tonneau or roll, which in the confusion of sensations is likely to become another right-handed spiral-dive. It is therefore of great practical importance to prevent this vertical vertigo completely or to change it to a harmless horizontal type. This is a very likely explanation of the appalling frequency of plane-crashes following either intentional or accidental spiral dives by inexperienced pilots.

This dangerous reaction may be prevented by bowing the head 90 degrees forward during the nose-dive, facing the floor of the craft, by which the pilot thus allows only his horizontal semicircular canals to be stimulated. Letting up on the spiral nose-dive if the craft comes from the vertical position into the horizontal plane again he has to sit upright immediately again, by which the stimulated horizontal semicircular canals remain horizontal and the vertigo is accordingly kept innocuous.—*Kurt Fuchs, M.D., The Canadian Medical Association Journal.*

★ **BUY WAR BONDS** ★

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

The House of Delegates of the American Medical Association at the last annual meeting did not take any specific action or stand on the proposed amendment to the Social Security Act for compulsory hospital insurance.

It is proposed under the proposed amendment to the Act, that a cash indemnity in the amount of $3.00 a day for hospitalization would be set up. The American Medical Association previously approved cash indemnity payments for both hospital service and medical service. The question can be raised at the present time that inasmuch as the A.M.A. had previously approved cash indemnity payments, whether there is now any justifiable reason for opposing such an amendment to the Social Security Act. Perhaps the one debatable feature that still exists is that the A.M.A. did not approve any compulsory plan. The whole question of social reform and regimentation thus again presents itself for discussion. The common man long discussed in politics and by reformers, has risen to new heights in our democracy, and there are many who believe that we are just becoming democratic, and that the capitalists and the aristocracy no longer control the destiny of the common man, and that he is coming out of his bondage of economic and social slavery, and developing a true democracy that will render him free from fear and free from want, along with other freedoms that he now enjoys. There is much evidence that this has been for a number of years and is at present a world wide movement, and perhaps it was the main factor in the cause of the present world war. That rapid industrial development created new social and economic problems can not be questioned. Most of us are agreed that in our rapid industrial development there was not an equal social and economic development and reform taking place. It is obvious that we had to have the industrial development first, and that social and economic reforms would of necessity follow. Most of us are agreed that there was and still is definite need for social and economic reform and readjustment. The problem is how can this best be accomplished without dislocating our democracy?

There appears to be at least two ways of approaching the subject. The first would be such reforms and legislation that allow to make it possible for the individual to more adequately help himself through such processes as education and special training, and through the elimination of various forms of rackets that in the past have taken many of his savings from him. Government should assume a definite responsibility along these lines.

The second method of social and economic reform is one of regimentation in which a centralized bureaucracy or military government assumes the responsibility of giving social and economic security through such agencies as the Social Security Board and other legislative acts. It then becomes one of compulsion and taxation and administration by the Government. Some say that such a government is really a government of the people, by the people and for the people, as contrasted to government of the few, by the few and for the few. The world is in a great struggle fighting for something. Most of us are perplexed as to just what we are fighting for, and we are further perplexed as to obtaining those things that we think we are fighting for. Perhaps we shall discuss this question in this column at a later date.

Medicine's Role in the War Effort

QUESTIONS AND ANSWERS ON PROCUREMENT AND ASSIGNMENT SERVICE

Q. Will the Procurement and Assignment Service protect a doctor from the draft?

A. The Procurement and Assignment Service was not established to protect anybody from anything. Its function is to enroll physicians, dentists and veterinarians and assign them to the positions in which their services will be of greatest value to the nation in the war emergency. This function obviously parallels the responsibilities of Selective Service, but the officials of the Selective Service have welcomed the cooperation of the Procurement and Assignment Service in dealing with these professional groups. To implement this cooperation, General Hershey issued a memorandum to Selective Service boards asking them to secure through the state director of Selective Service the recommendations of the Procurement and Assignment Service wherever they are considering the classification of a physician, dentist or veterinarian. Hence, if a doctor has enrolled with the Procurement and Assignment Service, his Selective Service board will be so advised and a recommendation for his deferment, until his services are needed in a professional capacity, will be made.

Q. Will men under 45 be called before men over that age will be considered?

A. The Army will consider applications for commission from men up to the age of 55 and the Navy up to the age of 50. The greatest need, however, is for younger men. Hence, the first call by the Procurement and Assignment Service will be for men under 36 and then men between 36 and 45 years of age.

Q. If a physician is physically disqualified for a commission, is he still subject to the draft?

A. The physical requirements for officers are higher than they are for enlisted men, but under the modified requirements for "limited service" in the Medical Corps most, if not all, physicians who meet the requirements for enlisted men will be eligible for commissions. If not, the physician concerned should consult the chairman of his State Procurement and Assignment Service Committee relative to service in a war industry or some other essential civilian service.

Q. How much consideration will be given to the choices of service listed on the enrolment form of the Procurement and Assignment Service?

A. So far as possible, the choices of service listed on the enrolment form will be given consideration. However, if the needs of the armed forces demand it, it may at times be necessary to ignore personal preferences.

Q. Do physicians in shipbuilding and airplane factories receive any special consideration?

A. Essential medical service in vital war industries must be maintained. To do this, certain medical positions must be declared essential. Individual physicians who are of military age and physically fit for service should be declared essential in such positions only if it is impossible to replace them or have the necessary service provided by men not otherwise available for service with the armed forces.

Q. In determining the number of physicians needed to care for the civilian population, are rural communities considered on the same basis as larger cities?

A. A special committee is now working on the determination of minimum quotas of physicians for civilian medical care. In their studies consideration will be given to the density of the population, the ease of transportation, the availability of hospital service and other factors.

Q. Will doctors in draft age be called by the Procurement and Assignment Service on the basis of availability regardless of their Selective Service numbers?

A. In asking physicians to accept assignments, the Procurement and Assignment Service will select names by chance from alphabetical lists of the names of the physicians in the age group desired. Officials of national headquarters of Selective Service report that it is impossible to use Selective Service order numbers for this purpose. The first lists to be given assignments with the Army or Navy will be those who have

indicated these services as their first choice.

Q. How many people in a community can be served by one man?

A. Studies are in progress by a special committee of the Procurement and Assignment Service to serve as a basis for the determination of minimum quotas of medical service which should be retained for the civilian population. Until these studies are completed it has been agreed that, for general medical service, approximately one "effective" doctor to fifteen hundred population is the minimum coverage that should be provided. Limited specialists are not included in this basic figure.

Q. Is it true that unless an intern for 1942-1943 has a commission in the Army or Navy he may be withdrawn at any time?

A. National headquarters of Selective Service has advised local boards that medical students and interns who wish deferment and are physically enabled should apply for the commissions which are available to them. In view of this, interns who are physically fit and do not hold commissions may be subject to induction.

Q. What percentage of a man's time devoted to medical teaching is necessary to make him essential?

A. The determination as to whether an individual is an essential teacher cannot be put on a percentage basis. Some teachers on a full time basis cannot justifiably be considered essential, while others giving a much smaller proportion of time might be essential. In general, however, very special circumstances should exist to justify designating a physician of military age as an essential teacher unless he is devoting at least half time to teaching.

Q. Is the local draft board or the Procurement and Assignment Service to determine whether a doctor is necessary in his local community?

A. The legal responsibility for deciding whether any individual who is registered with Selective Service shall be given deferment rests with his local Selective Service board. However, General Hershey has directed local boards, when considering the classification of physicians, dentists or veterinarians, to secure the advice of the state committee of the Procurement and Assignment Service as to whether the individual under consideration is "essential" for the care of the civilian population in his community or whether he can be considered available for service elsewhere.

Q. How many physicians are there in the United States under 35 years of age? Under 45?

A. Of the 152,923 physicians in private practice in the continental United States, 37,753, or 24.7 per cent, are under 35 years of age, 35,240, or 23.0 per cent, are 35-44 years of age, 26,573, or 17.4 per cent, are 45-54 years of age, 26,076, or 17.1 per cent, are 55-64 years of age, 11,915, or 7.8 per cent, are 65-69 years of age, 8,112, or 5.3 per cent, are 70-74 years of age and 7,233, or 4.7 per cent, are 75 and over.

Q. Do you expect the needs of the armed forces to be filled by voluntary enlistment? If not, what is to be the procedure?

A. It is the firm conviction of the directing board of the Procurement and Assignment Service that the physicians of this country will willingly accept the assignments requested of them in meeting the medical needs of the nation during the war emergency. The executive order of the President establishing the Procurement and Assignment Service states that Mr. McNutt may "instruct the Agency to draft legislation, which may be necessary to submit to the Congress providing for the involuntary recruitment of medical, dental and veterinary personnel, in the event the exigencies of the national emergency appear to require it." The directing board, however, has given no thought to such legislation because it is convinced that it will not be necessary.

Q. In what grade may a doctor expect to receive a commission?

A. The policy which is being followed by the Office of the Surgeon General of the Army in making recommendations for commission is as follows:

1. All appointments must be limited to the quotas provided for medical personnel of various ranks in relation to the total over-all size of the Army.

2. All appointments in tactical units will be at minimum grades of first lieutenant, as no experience in civilian life qualifies a doctor for service in this capacity.

3. Appointments above the minimum grade will be made only on the basis of vacancies, special qualifications and there being no one qualified to fill the position by a promotion.

First lieutenant.— All appointments under 37 will be in this rank except for individuals who possess special qualifications for a particular vacancy which exists. Certification by specialty board will be considered evidence of such special qualifications. Applicants who previously held appointments in the Medical Reserve Corps in the rank of captain may apply for reappointment at the same rank.

Captain.— Initial appointees at the age of 37-45 may apply for this rank. Likewise, men under 37 with special qualifications.

Major.—Age 37-55. Eligible applicants must have the special qualifications required for appointments as captain and in addition experience and training which qualifies the individual as chief of a service or section, or executive of a large hospital.

Lieutenant Colonel and Colonel.—New appointments will be made in these ranks only for special assignments which cannot be filled by promotion.

Signed for the Board,
PROCUREMENT AND ASSIGNMENT SERVICE,
FRANK H. LAHEY, M.D., Chairman.

"GUIDES TO THERAPY FOR MEDICAL OFFICERS"

A technical manual for medical officers has just been issued by the Government Printing Office in Washington, entitled "Guides to Therapy for Medical Officers." The material on which the text of the manual is based was furnished largely by the various committees and subcommittees of the Division of Medical Sciences of the National Research Council with the assistance of other consultants. A preliminary note gives the names of all various specialists who cooperated in producing this book. The final editing was done by Dr. R. N. Nye of the Committee on Information of the Division of Medical Sciences of the National Research Council. The book is divided into seven sections, covering a general consideration, surgical emergencies, medical emergencies, diagnosis and treatment of venereal diseases, chemoptherapy and serotherapy in certain infectious diseases, treatment and control of certain tropical diseases, and the rickettsial diseases. Here in outline form is a compilation of the very latest information available on the subjects discussed as standardized for use under Army conditions. The book constitutes, therefore, an invaluable reference work for the Army medical officer and will be found most valuable by any physician under any circumstances. Copies of the book are available from the Superintendent of Documents, Washington, D. C. The price is 25 cents.

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GRADUATES IN AVIATION MEDICINE UNDER NEW SYSTEM OF TRAINING

The course of instruction in aviation medicine for aviation medical examiners is now divided into two parts, the didactic portion being conducted at one field and the practical portion at three army air forces classification centers. The first class to graduate under this new system of training was graduated on July 2. Appropriate exercises were held in each of the centers. The list of graduates from Illinois are:

Donald W. Anderson, 1st Lieut., Chicago.
Leon J. Armalavage, 1st Lieut., Chicago.
Robert E. Bowen, 1st Lieut., Chicago.
Milton J. Loring, 1st Lieut., Chicago.
Robert J. Stephen, 1st Lieut., Joliet.
Anthony J. Sweeney, 1st Lieut., Chicago.

ILLINOIS CONFERENCE ON NUTRITION FOR DEFENSE

The Illinois Nutrition Committee and the Nutrition Division of the Illinois Defense Council sponsored a conference on nutrition, which was held at Springfield June 19-20. Lydia J. Roberts, Ph. D., chairman of the Illinois Nutrition Committee and of the Department of Home Economics of the University of Chicago, presided at the opening session and gave an address entitled "How Is Illinois Equipped and Organized to Meet Its Nutrition Problems?" Dr. Roberts is a member of the Council on Foods and Nutrition of the American Medical Association.

Dr. Clifford Grulee, head of the pediatrics department of Rush Medical College, and Dr. M. H. Kronenberg of the Illinois Department of Public Health, among others, took part in a symposium on "What Is Our Nutrition Problem in Illinois?"

Helen Walsh, regional nutritionist of the Office of Civilian Defense, Health and Welfare Services, Washington, D. C., discussed "Highlights from the National Nutrition Program." Dr. Frank G. Boudreau, director of the Milbank Memorial Fund and chairman of the Food and Nutrition Board of the National Research Council discussed "Nutritional Problems in Wartime, with Special Consideration of the Nutritional Problems of Industrial Workers."

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FIRST AID TRAINING IN GARY STEEL MILLS

At the mills of the Carnegie-Illinois Steel Corporation in Gary, Ind., a round the clock program of first aid training has been set up which already has been completed by nearly seven hundred employees who have taken the twenty-hour standard Red Cross course in first aid. The schedule for the classes at these mills is arranged so that employees of all three shifts may participate. The classes are conducted by twenty instructors who have had Red Cross first aid certificates and are under the direction of Dr. D. E. Griffiths, chief medical officer of the emergency defense organization of this plant. One of the instructors was sent to Texas to receive special training in combating the effects of chemical and demolition bombs. The pupils who make the best records in the first aid courses are

selected for the stretcher teams, each being assigned to a definite station in the plant in case of emergency and each team composed of a captain and eight assistants. Others who have completed the course will be stationed in case of emergency at the four first aid and two dressing stations in the plant. Among those who have already completed their first aid course are one hundred ten girls, some of whom are expected to continue further training to qualify as nurses' assistants.

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MOBILE UNIT OF CHICAGO BLOOD DONOR SERVICE

The Chicago chapter of the American Red Cross placed in operation June 8, a mobile unit for the collection of blood from donors. Certain requirements must be filled by the local community requesting the mobile unit, and the facilities must be inspected and approved by a representative of the blood donor service of the American Red Cross before a definite date can be arranged. There must be a minimum of 100 persons over 18 and under 60 years of age who weigh 120 pounds or more and who are in good health. The local facilities must provide a clean, well ventilated space adequate for (1) a reception room to accomodate about 16 persons, (2) a room to accommodate ten cots with a sink with running water, (3) a smaller adjoining room or additional space which may be curtained off to be used as a recovery room, (4) a room with adjoining kitchen facilities which may be used as a canteen, (5) conveniently located toilets.

For the present, the mobile unit will not be sent outside of the area covered by the Chicago chapter of the American Red Cross, which includes Cook and DuPage counties and the southern half of Lake County, Ill.

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MANY JUNE GRADUATES ENTER MILITARY SERVICES

The annual national survey of colleges, technical schools, other than military academies and theological seminaries, and universities in the United States made by the Investors Syndicate indicates that 50 per cent of all the male graduates in June from one hundred and fifty-six leading institutions would join the Army, Navy or Marine Corps after commencement. Of another group of sixty-six schools, more than 25 per cent of the graduates were to enter the military services, while of a third group of one hundred schools less than 25 per cent of the graduates were to enter the military services.

Among the non-war positions offered to graduates, the profession of teaching received two out of every five "mentions," while secretarial work ranked second to teaching in non-war empolyment opportunities, being cited in one seventh of the "mentions."

The survey indicated that less than 3 per cent of the June graduates would enter such fields as medicine, chemistry, nursing, laboratory research, banking, selling, social work, home economics, accounting and clerical work.

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HOSPITAL CONTRIBUTES RUBBER PILLOWS TO SALVAGE DRIVE

The officers of Mount Sinai Hospital, New York, in ransacking the institution for scrap rubber, decided to turn in the sponge rubber pillows on which patients could lie and listen through radio earphones concealed inside. The one hundred and forty sponge pillows turned over to the government contain 400 pounds of high grade rubber. The hospital installed a central radio system in 1931 providing one hundred and forty rubber pillows with earphones. It has now been discovered that patients can listen comfortably to the radio simply by resting the earphones next to them in bed.

★ ★

EXPLOSION LABORATORY COMPLETED

An explosion laboratory, built of reinforced concrete topped by a hinged roof and specially designed to afford maximum safety to personnel, has been completed on the grounds of the National Institute of Health, Bethesda, Md. The laboratory will be used in the determination of the toxicity and potential health hazards of various old and new explosives.

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EMPTY VACOLITERS GIVEN TO ARMY AND NAVY IN HONOLULU

Since the raid on Pearl Harbor, Hospital Purveyors, Ltd., has issued more than 8,000 empty vacoliters free of charge to the army and navy and the several hospitals in and about Honolulu, and these hospitals have been permitted to retain the empty containers, since they use the contents for intravenous injections.

NEW ADDRESS FOR PROCUREMENT AND ASSIGNMENT SERVICE

The Procurement and Assignment Service for Physicians, Dentists and Veterinarians may now be addressed at 1006 U Street N. W., Washington, D. C.

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ARMY PHYSICAL STANDARDS MODIFIED

The War Department has stated that the army physical standards have been modified, effective August 1, in order to call into limited military service under a regular quota system men now in class 1-B due to minor physical defects. Among the 1-B eligibles are men whose weight and chest circumference are under or over the standard set for class 1-A and who are not in class 4, who have a minimum of 20/400 in one or both eyes without glasses if correctable with glasses to 20/40 in either eye, whose hearing in one or both ears is not less than 5/20, who have lost an entire thumb on either hand or who have lost three entire fingers, provided the thumb remains.

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RUSSIAN WAR RELIEF

Russian War Relief, Inc., with headquarters at 535 Fifth Avenue, New York City, announced May 28, that in the eight months since it was organized it has expended $1,128,949.23 for relief supplies for use in the Soviet Union and is increasing its rate of shipments each month. The group is conducting a campaign for six million dollars this year.

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THE ARMY IS IN EXCELLENT HEALTH

The War Department announced June 29 that the Surgeon General reports that the health of the army is excellent. No general outbreak of acute respiratory disease occurred in the winter months, and compared to the previous winter, there was a reduction of 52 per cent for all diseases and 70 per cent for respiratory infections. Since the winter months, the admission rates to the army for all cases have showed a steady decline of nearly 25 per cent, due chiefly to a falling off in respiratory infections. The venereal disease rates are now lower than at any time since the beginning of mobilization, and the syphilis rate for the first five months for 1942 is the lowest in the history of the army. There has been a steady decline of as much as 30 per cent in cases of gonorrhea.

In recent weeks there have been numerous admissions to hospitals on account of jaundice, which has the characteristics, the War Department said, of catarrhal jaundice (epidemic hepatitis), but the total number of cases in the entire army has not been enough to appreciably increase the admission rate for all diseases. The War Department points out that this is definitely not yellow fever and it is not dangerous to the general public. The disease is being studied, however, by some of the outstanding medical scientists. Outside of the United States, health conditions in the army continue favorable. There have been no serious epidemics and only slight rises in admissions due to diseases peculiar to some of the new areas where the troops are established.

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MILD TINCTURE OF IODINE FOR WOUNDS

With the widespread interest in first aid instruction and the distribution of millions of first aid manuals throughout the country, the druggists have been swamped with calls for "Mild Tincture of Iodine, U. S. P.," which has been adopted for first aid treatment by the Army, the Navy and the American Red Cross. Since reports indicate that some druggists express ignorance of the existence of such a product, the formula for Mild Tincture of Iodine, U. S. P. follows:

	Metric Formula	Alternative Formula
Iodine	20 Gm.	146 grains
Sodium iodide	24 Gm.	175 grains
Diluted alcohol	to make 1,000 cc.	1 pint

Dissolve the iodine and the sodium iodide in sufficent diluted alcohol (equal parts of alcohol and water) to make 1,000 cc.

The label on this product should be somewhat as follows: Mild Tincture of Iodine. Contains 46 per cent alcohol. An antispetic for application to cuts and wounds. There should also be a poison label followed by:

ANTIDOTE:—Give starch, white of eggs or flour mixed with water. Follow with emetic of mustard. Give strong tea, coffee, stimulants of diluted alcohol, whiskey or 1 teaspoon of aromatic spirit of ammonia in water. Demulcent drinks of flaxseed, if needed.

According to E. Fullerton Cook, chairman of the Committee of Revision of the Pharmacopeia

of the United States of America, pharmacists should always sell the U. S. P. Mild Tincture of Iodine for first aid, not the strong (7 per cent) tincture of iodine; neither should they prepare the mild tincture by diluting the strong tincture, for then it will contain potassium iodide instead of sodium iodide, and the alcohol percentage will not be correct. Sodium salts are much better for application to a wound than are potassium salts. Dr. Cook's announcement says that the strong (7 per cent) tincture of iodine should never be applied to a wound, as it evaporates quickly, leaving crystals of free iodine in the wound, which injure the tissues and prevent healing.

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RECRUITING BOARDS—SULFANILAMIDE—STUDIES OF WORLD AREAS

War Secretary Stimson told his press conference that every American soldier going into a theater of operations will be provided with a package of 5Gm. of crystalline sulfanilamide to sprinkle on wounds in addition to twelve sulfanilamide tablets for internal use. He said the Army is increasing the number of medical department officers' recruiting boards to supply the need for additional doctors. Two additional boards have been authorized in New York, Pennsylvania and California, and one additional board in Massachusetts, Ohio and Illinois, while one board is functioning in each of the other states. A medical officer from the army air forces has been added to each of the twenty-nine recruiting boards to obtain doctors for the air service and a dental officer has been assigned to each board to assist in obtaining dentists. The recruiting boards may be located through local medical societies or the Surgeon General, Washington, D. C.

The Division of Medical Intelligence, Preventive Medicine Service, Office of the Surgeon General, has prepared a series of studies covering four general world areas on health, sanitation and climatic conditions. These instructions are being issued to military attachés and members of military missions, as well as to medical officers of overseas forces, to protect the health of U. S. soldiers sent to those regions. Subjects treated include water consumption safety precautions, protection against mosquitoes and other insects that carry disease, prevention of diseases indigenous to the various regions, bathing precautions, care of the skin and feet, selection of suitable clothing, prevention of sunstroke, energy conservation, and health maintenance under desert or tropical conditions, prevention of illness from food spoilage or contamination and many other hygienic precautions.

Secretary Stimson said that the Women's Army Auxiliary Corps now has two contract nurses and, as the corps increases, female medical officers may be inducted into the corps or will be contracted at the rate of five for ever thousand women.

THE CARE OF THE PATIENT—II

Your study of the patient should be skillful and intelligently complete, not needlessly comprehensive. If every known examination were made of every patient, much that goes undiscovered in diagnosis might be revealed, but who could survive the ordeal physically, physically or financially? Certainly, a complete diagnostic survey should be made of each condition until its nature is clear, but the routine performance of needless tests indicates a lack of skillful observation and thinking, dulls clinical acumen, penalizes patients, wastes time and material, and gives the public an incorrect view of the cost of sound medical care. Do not misinterpret—let the study be thorough, expand it as far as need be to solve a given riddle or to advance knowledge, but do not expect mere elaboration of procedure to replace your clinical sense, nor rely on it to impress your colleagues or your clientele.—*Charles R. Austrian, M. D., New England Journal of Medicine, October 31, 223:695-702, 1940.*

EFFECT OF SHELTER LIFE UPON HEALTH

The health of many Londoners during the period of severe and prolonged attack from the air was affected by their stay for many hours at a time in protective shelters. It had been anticipated that shelters would be necessary, and many, though not enough, had been provided, but it was not foreseen that the continuous nature of the nocturnal attack would necessitate the provision of sleeping accomodation. In these places, for some weeks before bunks could be provided, people slept on improvised beds and in deck-chairs. One surprising complication was the onset in a number of cases of thrombosis of the deep veins of the leg and consequent edema of the ankle and foot, due to the fact that a person reclining in such a chair is apt to have his legs press unduly upon the lower transverse bar. The thrombosis is brought about by the continuous pressure with relaxed muscles. —*V. Zachary Cope, M. D., British Medical Journal, April 5, 1941.*

Original Articles

CANCER CONTROL IN ILLINOIS

RAYMOND VOORHEES BROKAW, M.D.
Chief, Division of Cancer Control
Illinois Department of Public Health.
SPRINGFIELD

From the standpoint of national economy, the control of cancer is a major public health problem. In the practice of medicine, it is largely a matter of early diagnosis and correct treatment. For the individual, it demands personal hygiene. By and large, cancer in Illinois follows the same pattern as elsewhere in the country and presents no important differences in behavior.

General Cancer Mortality — For a long period of years, cancer mortality has shown a numerical annual increase of about two per cent until it ranks second today as a principal cause of death, exceeded only by heart disease.

Whether this increase in the crude rate is apparent or actual, is a question which is frequently raised. Because of improvements in diagnostic methods there has been a gradual decrease in the percentage of incorrect diagnoses, and this would tend to increase the recorded mortality from the disease without an actual increase in the number of cases. On the other hand, there has been a marked and steady increase in the proportion of older persons in our population, particularly among those over 50; beyond which age the incidence of cancer is greatest and the vast majority of caner deaths occur.

On this basis alone, a marked increase in the cancer mortality may be expected for many years, even if the death rates in the various age groups remain at the present levels. This factor must be taken into account when measures for the control of this disease are considered, and when the success of such measures are evaluated.

An interesting, and more hopeful, aspect of the situation is the fact that the increasing death rate in recent years has not been uniform with respect to the various types of the disease.

According to U. S. Public Health Service reports, death from cancer of the skin, for example, have shown a significant decrease since 1920.

Analyzing the data from the industrial policy holders of the Metropolitan Life Insurance Company, Dublin stated in 1937 that " in the broad age period 35 to 55 the trend of the cancer death rate has been significantly downward for women. Such increases as are indicated in our data are almost wholly limited to men beyond age 55 and to women beyond age 65 (1911-1935)."

In 1934 Bigelow and Lombard stated that while there had been an actual average annual increase in the male cancer rate in Massachusetts during the years 1900-1915 and 1916-1932, there had been a significant drop in trend among females for the same periods.

"Where the deaths are subdivided by location of cancer," they state, "among the males significant downward trends are noted only in cancer of the skin. Among the females, digestive tract cancer and cancer of the skin have significant decreases. * * * Female genital cancer is about stationary, and cancer of the breast is slightly increasing. * * * It's our opinion that

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the improvement in the cancer death rate is caused by the concerted drive against cancer, by changes in the composition of the foreign population, and by the possibility of a saturation point in cancer being reached."

Federal Cancer Program —The federal government has officially recognized cancer as an important public health problem by the recent establishment of the National Cancer Institute at Washington.

The Institute has been staffed by scientists eminent in research. A National Advisory Cancer Council, consisting of six leading medical or scientific authorities in the cancer field, has been appointed to supervise its general activities.

The program of the Institute includes cancer research in its own and other laboratories throughout the country, aid in the development of cancer control programs in the States, cooperation with other agencies in lay education, the granting of fellowships to physicians for special training in cancer work, the loan of radium to hospitals for the treatment of indigent patients, and the financial assistance of universities and laboratories in their research problems. Publication of an excellent cancer Journal was begun in 1940.

Cancer Programs in State Health Departments. Massachusetts. Official cancer control work in State departments of health was pioneered by Massachusetts with the establishment of its Division of Adult Hygiene in 1926.

In response to public demand, the legislative enactment provided for the establishment of a state cancer hospital and local tumor clinics "with or without cooperation on the part of municipalities, local physicians or other agencies."

There are at present (1941) 21 state-aided cancer clinics in general hospitals, so located that a clinic is within 25 miles of any point in the state. These clinics are entirely diagnostic. Two cancer hospitals are now maintained for treatment: Pondville, 145 beds; Westfield, 50 beds.

Any Massachusetts resident may be admitted to the hospitals by certification of a practicing physician regardless of his financial status. The clinics are administered by committees appointed by the local medical organization. The standards of operation must meet health department requirements. Any physician may bring or send his patient for diagnosis. The patient is returned to the physician for his further action. The physicians give their time. Expensive diagnostic services (x-ray film, etc.) are paid for by the State if the patient can not afford it. For the clinic itself the State provides: (1) advice, information, and literature; (2) funds for a social worker, social worker's travel, x-ray diagnosis for those unable to pay, clerical assistance, postage and other miscellaneous expense, and for teaching clinics; (3) special clinics (by consultants) for the staffs of the clinics; and (4) reference of cancer cases to the cancer hospitals. A tumor diagnostic service at Boston gives any physician a report on specimens without cost.

New York. A Division of Cancer Control was created in the New York State Health Department in 1931, with the Cancer Institute at Buffalo (founded in 1910) as a part of this Division. In 1939 the Cancer Division was reorganized, with headquarters at Albany, following recommendations by a legislative Cancer Survey Commission.

The Cancer Institute at Buffalo has about 100 beds for cancer cases. Patients are admitted by reference of a practicing physician; and are treated without charge regardless of their ability to pay. There are 82 laboratories approved by the State for tissue diagnosis in 30 counties served by 44 pathologists. Of the 49 tumor clinics in the State, 23 are in New York City and 26 in the rest of the State. These clinics are at present maintained by the local hospitals; the only state aid is the provision of tumor consultants. For the terminal care of cancer cases, hospitals with a total bed capacity of 30,000 admit patients who can pay. For indigent terminal cases, New York City has about 530 beds and up-State New York has one institution with 110 beds (Hawthorne). The average stay in these institutions ranges from 56 days in general hospitals throughout the State, to 83 days in New York City hospitals for the indigent, and 133 days in the up-State hospital for the indigent (Hawthorne).

Regarding policy, Doctor Kress, Director of the Cancer Division, in a personal letter, said: "We are making every effort to keep the cancer care in the hands of the medical profession and

to make it unnecessary for the cancer patient to travel more than fifty miles to obtain this care."

Commenting upon the lack of adequate diagnostic and therapeutic facilities in up-State New York, a member of the Legislative Survey Commission stated: "These inadequacies could be met in one of two ways, by building new cancer institutes or by amplification of existing local facilities. Each method has its advocates and each its merits. It is possible that eventually both will have to be utilized. From a consideration of the imminent need of improving the awareness and knowledge of the general practitioner regarding diagnosis, and of making treatment readily available without the need for traveling long distances to obtain it, the Commission adopted the view that the present situation can best be met by utilization and extension of local facilities, in the form of adequately manned and equipped tumor clinics in various hospitals throughout the State."

In calling attention to the fact that 27 counties in up-State New York lacked laboratories approved for tissue diagnosis, the Commission stated, "It would appear that one of the important functions of a State program for the control of cancer should be that of providing adequate facilities for the pathological diagnosis of cancer wherever these facilities may be lacking."

Regarding terminal care of the indigent, a member of the Commission stated: "Perhaps the most difficult problem of all is that of providing terminal care for the great number of patients who are unable to pay for it. The question of subsidizing the hospitalization of these patients is still under consideration. In many instances these patients could be cared for at home, provided that facilities for nursing-care were readily obtainable. The Commission has accordingly recommended that the solution to the problem be sought in the direction of amplifying the facilities for home-nursing care in the various counties of the State, and has urged that communities make provision of such care a part of their general public health nursing program. Such a plan would enable the terminal cancer patients to remain under the care of his or her family physician and considerably reduce the need for hospitalization of these patients."

Connecticut, Georgia and South Carolina also conduct extensive cancer control programs as a direct function of the State health department. The activities of these departments are similar to those of Massachusetts and New York.

Illinois Division of Cancer Control — The Division of Cancer Control of the Illinois State Department of Health was created in 1939 by legislative action in response to a public demand. The law provided for an Advisory Board to the Division to be appointed by the Governor with the advice of the medical organizations. It also provided that the Chief of the Division be appointed by the Governor upon the recommendation of the Advisory Board. Appropriations included simply the salary of the Chief and a secretary. The Division functions as a component part of the State Department of Public Health, under the supervision of the State Director of Health.

Advisory Board — The present membership of the Advisory Board includes: D. J. Davis, M.D., dean of the University of Illinois College of Medicine, Chicago, Chairman; William Cooley, M.D., gynecologist, Peoria; Fauntleroy Flinn, M.D., radiologist, Decatur; Roswell T. Pettit, M.D., radiologist, Ottawa; James S. Templeton, M.D., president of the Illinois State Medical Society, Pinckneyville; John A. Wolfer, M.D., associate professor of surgery, Northwestern University Medical School, Chicago; and Edwin F. Hirsch, M.D., director of Henry Baird Favill Laboratory and pathologist to St. Luke's Hospital, Chicago, Secretary.

The Board holds monthly meetings; takes a keen interest in the work of the Division; and exercises freely its prerogatives. The Illinois State Medical Society is at present represented on this Board by its present President, the Chairman of its Cancer Committee, and a member of its Cancer Committee. This close association insures the conservation of the interests of the practicing physician and the soundness of this Division's activities from the medical standpoint, with resulting benefit to the public as its officially constituted agency for the control of cancer.

The program of the Division of Cancer Control falls naturally into four categories: lay

education, professional education, promotion of diagnostic and therapeutic facilities, and statistical research.

Lay Education — In the field of lay education, the activity of the Division is limited as far as possible to the preparation and editing of various forms of educational material. The excellent work of the Division of Public Health Instruction of the State Health Department along these lines is not duplicated.

Professional Education — The problem of professional education in cancer among physicians, dentists and nurses is considered to be of primary importance. A comprehensive book emphasizing the diagnostic points of cancer care is in course of preparation, for distribution to physicians by the State Health Department when it is completed. Similar books for dentists and nurses are contemplated. As the work of the Division advances, it is hoped that substantial assistance may be made available to medical and other professional groups in the organization of cancer symposia for the general practitioner, cancer seminars for specialists in the field, and similar educational opportunities, all to be conducted under proper professional auspices.

In this connection, it may be profitable to pause for a moment and listen again to the words of Malcolm L. Harris: "Medicine is not a dead subject but a living one that is progressing at a more rapid pace today than at any time in the history of its existence. *Any physician to keep abreast of the progress that is being made, must be an eternal student.* No eight-hour work-days are his; the candle frequently burns at both ends." True twelve years ago when he said it, even more true today.

Promotion Facilities — The promotion of more adequate diagnostic and therapeutic facilities for the care of cancer cases is a major function of the Division of Cancer Control.

It is the consensus of authoritative opinion in the cancer field that tumor services in general hospitals constitute the most effective means of reducing cancer morbidity and mortality. Many general hospitals in the State find it hardly possible to maintain these facilities with the limited resources at hand. This Division has accordingly planned to render substantial assistance in the establishment of such a service to a small number of hospitals strategically located throughout the State, where the need is unquestionable, where the requirements can be met, where the greatest number may be served, and where such aid may be desired.

In conformity with sound policy, the approach to any locality for the proposed establishment of a tumor diagnostic service in a general hospital shall be without exception, through the local medical society and with the formal approval of that body.

Since such a service is essentially a hospital function, the local administrative hospital board shall have complete and independent control of the organization and operation of this facility as an integral part of the hospital program. The Division of Cancer Control will act simply in an advisory capacity; but will reserve the right to withhold support whenever satisfactory standards are not maintained.

This contemplated project has been carefully considered and approved in principle by the Advisory Board to the Division. Its initiation is at present contingent upon an apropriation by the Legislature now in session.

Statistical Research. — Statistical data do not as a rule render direct service to a patient in any public health program. Yet any well conducted enterprise must keep books in order to be able to run the business efficiently and also to calculate the return on the investment. In cancer control we must be satisfied with small gains over a period of years; and this makes it more imperative that we study closely the factors which may be responsible for less desirable end results.

DIAGNOSIS AND TREATMENT OF CANCER

It is now generally recognized that cancer is not a single disease but a great group of diseases differing widely in their make-up and behavior. Every tissue and organ of the body is subject to malignant growth. No age is free from cancer. It is an important disease of childhood as well as of middle and later life. Cancer of the breast has occurred as early as 17 years of age. A death from cancer of the uterus in a girl under 20 was reported from Illinois in 1939.

The onset of cancer is often utterly devoid of early signs or symptoms. One of the most amazing situations is the apparent good health of many persons suffering from early or even well established cancer, with little or no complaint. When early signs of cancer *are* present they so often resemble conditions which may be referable to other diseases that a differential clinical diagnosis is difficult if not impossible.

It has been estimated that most physicians in general practice, the country over, see about three cases of cancer in a year. On this basis, it is hardly reasonable to expect that he will recognize each case encountered. It does seem fair to expect, however, that he will give his patient the benefit of simple but careful examinations which may be quite revealing to even the ordinary observer.

One of the most effective means of familiarizing the general practitioner with cancer in its protean forms is the concentration of patients in the tumor diagnostic service of a general hospital which is conveniently accessible to him, where he may see in one morning more cases of malignant disease than he may encounter in his private practice during several years.

Every case of cancer which comes to a physician's office is an emergency. Upon his judgment the fate of the patient often rests. In no other disease does early diagnosis and correct treatment have such an important bearing upon the survival of the patient as in cancer. As Will Mayo has so aptly said, "A cancer that comes to you is less malignant than one that goes away from you."

The diagnosis and treatment of cancer is no longer a "one man job." To give the cancer patient of today the best service, the general practitioner must refer him to more competent hands; the cancer surgeon must know radiation therapy; the radiologist must know cancer surgery; and both must be acquainted with the science of the pathologist.

Cancer as a Personal Problem. — With rare exceptions, cancer is an essentially personal matter. It apparently has little relationship to the influences of environment or to human contacts. Cancer comes from within; obscure in its origin, insidious in its onset and stealthy in its destruction.

For the individual, the avoidance of cancer is largely a matter of maintenance of personal hygiene. Years ago (1934) MacCarthy of Rochester said, "Cancer is, in my opinion, a simple problem, although the various specific causes may never be known and no specific cure ever found. It is a problem of health in general, external and internal cleanliness, and heredity."

We may accept his first premise perhaps, and question the latter. Plain soap and water has long been advocated by Ewing as a most effective prophylactic against mouth cancer. Bloodgood used to say that he never found cancer of the face in a beautiful woman because she paid so much attention to her complexion. As to heredity, the geneticists are probably correct in stating that the individual need not be worried about that as far as cancer is concerned. It is difficult to make mice of men. And the only *sure* thing we know about any man's heredity is that his ancestors were not sterile.

An important cause of disastrous results in the treatment of cancer is the failure of the individual to recognize the significance of early signs. In some cases the failure of the physician to make a satisfactory examination is responsible for an avoidable fatality. In many cases, with the nature of the disease the same, and the method of treatment the same, *the stage of the disease* makes all the difference between success and failure.

CONCLUSIONS

In conclusion may we repeat that cancer is recognized as a major public health problem and therefore has a legitimate place in every well balanced public health program. By an intelligent application of the knowledge now possessed cancer can to an appreciable extent be controlled.

The importance of the early diagnosis and correct treatment of cancer, in the practice of medicine, can not be over-emphasized. The cure of cancer is no longer an "one man job."

As Bowman Crowell has well said, "Important as lay education may be, there is little use in arousing public interest in cancer if organized facilities for diagnosis and therapy are not available and if the profession in general is not alive to the advantages thus offered."

In his address as retiring president of the American Association for the Advancement of Science, in 1937, Conklin of Princeton University stated, "Scientific progress in medicine . . . is far in advance of its social utilization, but not in advance of its urgent need."

DISCUSSION

Dr. Erich Uhlmann, Chicago: The excellent presentation of Dr. Brokaw on the organization of the fight against cancer and the efforts of the Illinois Division of Cancer Control has covered the problem in question so thoroughly that there is little left for discussion. Therefore, I shall limit myself to emphasize one point already mentioned by Dr. Brokaw: the professional education; and furthermore to say a few words about our own organization at the Michael Reese Hospital and the functions of a tumor clinic in a general hospital.

The laity has, at least in the larger communities, become well aware of the danger of cancer. But from our experience in our daily work, it is our impression that the accomplishments in cancer diagnosis and therapy have not reached the general practitioner to such an extent as to markedly improve the care for the cancer patient. This is in our opinion only to a small degree due to failure on the part of the general practitioner, but rather a failure in our medical training system. In restricting myself to the situation in Illinois, there is to my knowledge not one medical school in the State which has provided for special courses or classes in cancer diagnosis or therapy. One may object that the problem of cancer is such a difficult one that it must be left to post-graduate schools for teaching and training the medical profession. But apart from the fact that even post-graduate training is offered to only a limited amount and this often by private institutions, there is certainly a definite need for such courses in our medical schools in order to familiarize the student with the problem and to arouse and stimulate his interest. I believe that it is a task for the State University to take the lead in creating such courses in the management of malignant diseases for the and to lay the foundation stone for better training medical profession.

The second point that I wish to discuss briefly is the functioning of the Tumor Clinic in a general hospital as executed in the Michael Reese Hospital. This Tumor Clinic is organized according to the rules laid down by the American College of Surgeons and is approved as such by this organization. It is built upon the Cooperation of the representatives of the different departments of the hospital (surgery, gynecology, internal medicine, pathology, etc.,) who have a special interest in malignant diseases and serve for a period of three years in this group. We hold clinics twice a week where the diagnosis of the individual case is thoroughly discussed and the course of therapy decided upon. These clinics are held under the leadership of the Director of the Tumor Clinic, who in our case is at the same time the Attending Radiotherapist of the hospital. It is a hospital rule that all patients of the out-patient department and of the hospital wards with malignancy or suspicious malignancy, *must* be seen in consultation by the Director of the Tumor Clinic before any specific therapy is started. This rule guarantees that all malignancies in the hospital are actually under the control of the Tumor Clinic which remains in control through its own filing system and its own social service department for the lifetime of the patient.

In the more than three years since I have had the privilege of directing this Tumor Clinic we have encountered only very few difficulties in handling cancer patients. We have found it advisable to hold special clinical conferences once a month for the members of the staff of the hospital where interesting tumor cases are demonstrated, the diagnosis discussed, and the therapy analyzed, the literature reviewed, microscopic slides and x-ray films studied, and all questions involved frankly discussed. These conferences have proven of great value in integrating the work of the Tumor Clinic with the various departments of the hospital, to create interest among other physicians on the staff and for the mutual benefit of the members of the Tumor Clinic group. The time is too short to go into further details, but we are convinced that our work is contributing its share to the common task of improving the facilities for the patients suffering from cancer.

Dr. R. V. Brokaw, Chicago. Conclusion: I appreciate very much Dr. Uhlmann's kindly words of commendation. I want to congratulate him on the results accomplished at Michael Reese Hospital in the operation of their cancer clinic.

I appreciate very much the opportunity of presenting to this body facts regarding a disease which is of first rank so far as its possibilities in Illinois are concerned.

EFFECTIVE TREATMENT FOR AN EYE DISEASE

The direct application of a 5 per cent ointment of sulfathiazole or sulfathiazole sodium was effective in causing rapid healing in 11 of 15 cases of inclusion conjunctivitis (inflammation of the membrane that lines the eyelids and covers the eyeball in front, due to a particular virus) in infants, children and adults, Phillips Thygeson, M.D., and William Stone Jr., M. D., New York, report in *The Journal of the American Medical Association* for May 30. In 10 of the 11 cases the virus could no longer be found after the third day of treatment. Two of the remaining 4 cases, 1 in a child and 1 in an adult, required supplementary treatment by mouth; the remaining 2 cases, both in infants, failed to heal until the mothers learned to employ the medication properly. There were no recurrences. Untreated cases of the disease take from four to six months to heal.

ESOPHAGEAL DIVERTICULUM

ARTHUR E. MAHLE, M.D.
Assistant Professor of Medicine, Northwestern University Medical School; Physician, Evanston (Ill.) Hospital.

AND

FREDERICK CHRISTOPHER, M.D.
Associate Professor of Surgery, Northwestern University Medical School; Chief Surgeon, Evanston (Ill.) Hospital.

The first clear description of an esophageal diverticulum was published by von Ludlow[1] in 1769. Previous to that time, esophageal diverticula had been found only at autopsy. Ludlow's patient lived for five years, death being caused by the diverticulum.

In the years following 1769, according to Starck,[2] a few articles on esophageal diverticula were published, notably by Isenflamm (1778), Bucking (1781), Giannella (1782), Marx (1783) and Roennow (1783). These authors recognized the disease during life and suggested such therapeutic procedures as the giving of nutrient enemas and esophageal tube feeding; later bougies were used.

In 1877 Zenker and Ziemssen[3] published a monograph on diseases of the esophagus and established a classification of diverticula of the esophagus into those of traction type and those of pulsion type — a classification that is still in use today. The pulsion diverticulum, which arises from the lower portion of the pharynx, is also called a pharyngoesophageal diverticulum and is often spoken of as the Zenker diverticulum. It is recognized more easily during life because it almost always produces difficulty in swallowing.

In 1900 Hugo Starck[2] published his monograph on diverticula of the esophagus, in which he reviewed all of the cases reported by Zenker and Ziemssen and all others reported up to the time of his study. Since 1900 a rather extensive literature on esophageal diverticula has arisen, but, despite this fact, it is of interest that there are many patients with esophageal diverticula who suffer from dysphagia for many years before the cause is discovered. It seems strange that a structure which performs so frequently such a simple mechanical function as swallowing and which is so readily examined either fluoroscopically or by means of the esophagoscope, should hide its diseases so easily. The early symptoms frequently appear to be insignificant and probably are interpreted as due to esophageal or pharyngeal neuroses.

The most common site of a diverticulum of the esophagus is the lower portion of the pharynx. These diverticula are designated as pharyngoesophageal diverticula, as the pulsion diverticula of Zenker or as high esophageal pulsion diverticula. The second site is in the region of the left main bronchus, where the so-called traction type of diverticulum develops; these are thought to be due to inflammatory changes in close proximity to the esophagus which pull the esophageal wall outward. The third site is at the cardia.

The diverticula of the thoracic portion of the esophagus are rarely of sufficient size to cause symptoms. Barrett[4] reviewed the literature in 1933 and found reports of 115 cases. He concluded that unless the diverticulum was rather large, few of the patients noted any symptoms.

Vinson[5] collected reports of 42 cases observed at the Mayo Clinic and was impressed by the difficulty of evaluating symptoms and of associating them with the lesion in the esophagus. In 12 cases the symptoms were apparently not related to the thoracic diverticulum. In the remaining 18, it appeared that the symptoms could be associated with the thoracic diverticulum. These symptoms were dysphagia, epigastric pain, vomiting, regurgitation, substernal distress, gas on the stomach, anorexia, belching, bloating, loss of weight, cough, chills, fever, heart burn, nausea, regurgitation of blood and hiccup. However, in the majority of cases the symptoms were mild, and no treatment was instituted. Eight of the 18 patients had cardiospasm, and 6 were relieved after dilation with a hydrostatic bag. Four of the remaining 10 patients were relieved by the passage of sounds into the stomach.

The pharyngoesophageal or pulsion diverticula of the upper portion of the esophagus cause definite, recognizable symptoms. Whether or not they should be classified as true diverticula is questionable. Such a diverticulum is actually a herniation at the pharyngoesophageal junction and consists of a pouch of the mucosal layer of the esophagus which herniates through the triangle formed by the circular and oblique fibers of the inferior constrictor muscle of the pharynx.

As this area does not have an adequate muscular support, compression at this point may produce a form of herniation in the act of swallowing.

The symptoms of the patient with a pharyngeosophageal diverticulum can be divided roughly into two groups. In the early stage the patient may note mild dysphagia in swallowing various types of food. This may be noted particularly with dry foods, which appear to stick in the patient's throat and which he had to wash down with water. He may observe quite early a peculiar gurgling noise in his throat on swallowing. It is thought that this sound is due to the regurgitation of a bubble of air from the diverticular sac in the act of swallowing. Salivation is an early symptom and may be particularly annoying at night. A few of these patients note regurgitation of food or saliva only when stooping over, and some are annoyed by an irritating cough, noted more frequently when lying down.

The early symptoms become gradually aggravated, and as the sac enlarges, pressure is brought to bear on the lateral esophageal wall, obstructive symptoms then becoming more evident. The pressure on the esophageal wall may not be due entirely to enlargement of the capacity of the sac but also to an acute and chronic inflammatory process producing a thickening of the wall of the sac. As this inflammatory thickening progresses and as the sac enlarges, the diverticulum begins to point downward, so that the large sac appears to enter the upper part of the thorax. As the sac is pulled downward, the wall of the esophagus is pulled upon, and the lumen of the esophagus is further obstructed. In addition, the opening into the esophagus is reduced in size, and a few of these patients may experience pain at the site of the diverticulum. Frequently they will relieve this pain by ejecting food from the sac by forceful regurgitation, by stooping over (draining the sac by posture) or by using external pressure. As the difficulty in swallowing becomes more and more marked, leading occasionally to almost complete obstruction, loss of weight, secondary anemia and avitaminosis are notable.

In the diagnosis of an esophageal diverticulum the clinical history is by all odds more important than the clinical signs. Palpation, auscultation and percussion frequently are of little value. The general weight loss and anemia are apparent when marked obstruction to swallowing is present. The most reliable clinical evidence is disclosed by fluoroscopic examination, which readily outlines the diverticulum. If there is an extremely small diverticulum near the lower portion of the pharynx, it may be visualized only with difficulty, especially if the opening is so large that emptying occurs almost immediately after the barium mixture is swallowed. Esophagoscopic examination, which is not without some hazard, rarely has to be performed and then only to rule out a possible neoplasm in the sac.

The treatment of a high esophageal pulsion diverticulum, that is, the diverticulum whose pouch arises above the sphincter formed by the cricopharyngeus muscle, is surgical. The treatment of a diverticulum in the lower portion of the esophagus is symptomatic.[6] The evolution of the operative treatment of esophageal diverticula is of considerable interest. According to McClure[7] the first operation for this condition was performed by Nicoladoni,[8] in 1877; but the first successful operation was that of Wheeler,[9] in 1886. Cases were reported by von Bergman and Kocher in 1892. In 1904 Halstead[10] reported a case in which treatment consisted in invaginating the small sac. Invagination by circular and longitudinal pursestring sutures was reported by Bevan[11] in 1917. In 1907 Goldman[12] reported 2 cases in which the two stage operation was employed. In the first stage the neck of the sac was ligated to close off the diverticulum to food, but not so tightly as to strangulate it. In 1910 Charles Mayo[13] warned against the danger of fatal aspiration from emptying the contents of the sac into the pharynx. In this same year Stettin[14] reported an operative mortality of 18.7 per cent in 48 cases, the principal danger being infection. According to Gottstein,[15] in a series of 66 cases without operative treatment, 36 died of the malady. By 1915 the operative mortality in 70 cases had fallen to 11 per cent.[15]

It was early recognized that the chief danger in these operations lay in infection of the mediastinum resulting from opening the sac. As late as 1916 one sees the statement: "As a preliminary operation to extirpation of the diverticulum, gastrotomy is advisable."[15] Greater

safety was secured by mobilizing the sac in the first stage of the operation, and, after ten to fourteen days, during which the mediastinum becomes well walled off, removing the sac. In 1916 Murphy[16] and in 1919 Halstead[17] recommended the two stage operation. In 1918 Judd[18] thought that infolding was satisfactory for a small sac but advised the two stage operation for larger sacs. Judd and Moersch[19] recognized the parts played by Murphy and Mayo in the development of the two stage procedure. The latter[20] recommended the two stage operation when the sac extended to the thorax.

At the present time the one stage operation has been revived and has many notable advocates. The lowered mortality is attributed to more accurate closure of the esophagus. In 1930 Jackson and Babcock[21] reported 7 cases in which the operation was successfully done in one stage with esophagoscopic assistance. In 1931 Babcock and Jackson[22] continued to advise the one stage procedure with location of the sac by means of the esophagoscope. The sac was cut off and the esophagus closed with two layers of fine silk and the overlying tissues with chromic catgut and silver wire. Eliason, Tucker and Thigpen[23] have stated that the "procedure of choice is the one stage operation with the aid of the esophagoscope, anesthesia being avertin and local." These authors reported 10 cases with 1 death. Torek[24] prefers the one stage operation and believes that the esophagoscope should be in the esophagus while the suturing is in progress, the opening being surrounded with protective gauze. Jones[25] has performed 35 one stage operations and strongly prefers this method. In a letter to McClure,[7] Lord Moynihan urged the employment of the one stage operation, which he had used successfully in 15 cases. McClure[7] reports an interesting case in which the sac was dissected free from the outside and then inverted with a catheter inside and removed with a snare.

The two stage operation, however, has received the heartiest endorsement. Eggers[26] says: "A study of the literature shows that, owing to the diminished likelihood of mediastinitis, the two stage method has a lower mortality." The outstanding exponent of the two stage operation at present is Frank Lahey. In 1937[27] this surgeon studied the end results in 53 cases of two stage operations and found good results in 49. In 1939 he[28] reported 104 operations by the two stage method with only 1 death. The two stage method is also endorsed by Heyd,[29] McClure[7], Judd,[30] Macmillan[31] and McEvers,[32] and, as has already been stated, by J. B. Murphy, Halstead, C. H. Mayo and Eggers.

The operation may be carried out under general anesthesia, but local anesthesia is considered much safer. The deep (paravertebral) cervical plexus block, which has been well described by Woodbridge,[33] will afford anesthesia of the esophagus and other deep structures. The superficial cervical nerve block is considerably safer.[34] We believe that this should be preceded by the giving of 60 to 70 mg. per kilogram of body weight of avertin by rectum and supplemented for a short time, if necessary, by inhalation of ethylene. In most cases fluids and food will be administered for two to four days by means of a Levine catheter passed through the nose. Lahey[35] stresses the importance of passing bougies every two or three months for the first postoperative year.

CASE REPORTS

Case 1. — S.K., a man aged 33, was admitted to the Evanston Hospital on Feb. 20, 1940. He complained of difficulty in swallowing foods, especially solid foods, and of regurgitation of eight months' duration. He stated that beginning eight months before admission to the hospital such foods as apples, nuts, crackers and bread seemed to stick in his throat every time he tried to eat them and that he was able to cough the food up. This dysphagia became more severe until, two months after the onset, fluids and soft foods also were swallowed with difficulty and were regurgitated. No pain was felt on eating, but a sense of constriction in the neck was noticed. During the next four or five months his diet was limited almost entirely to liquids and soft foods, six or seven feedings being taken daily, but dysphagia and regurgitation persisted. Regurgitation usually took place about thirty minutes after eating, but at times the patient was aware of food being passed into the mouth that had been eaten as long as twelve hours previously.

The patient was a well nourished man who did not appear acutely ill. Physical examination revealed no abnormality. The blood pressure was 122 systolic and 66 diastolic; the pulse rate, 80; respirations, 18; temperature, 98.6 F.; hemoglobin, 90 per cent; erythrocytes, 4,260,000; leukocytes, 9,600; Kahn reaction, negative; urinalysis, negative. Roentgenologic examination with barium given by mouth demonstrated a

medium-sized diverticulum in the upper third of the esophagus. The gastrointestinal x-ray findings were negative. A two stage operation for removal of the diverticulum was done. On Feb. 24, 1940, the first stage incision was made along the anterior border of the sternocleidomastoid muscle. After the superficial fascia had been separated, the sternocleidomastoid muscle was retracted laterally and the prethyroid muscles medially. The omohyoid muscle was then cut. The middle thyroid vein was cut and the gland retracted medially. In this manner the sac was exposed and grasped with Babcock forceps and retracted into the operative field. It was then carefully dissected free down to the base of the diverticulum. The blind end of the sac was then attached to the prethyroid muscle by means of two interrupted silk sutures. A cigaret drain was then placed in the upper portion of the mediastinum and the skin closed with black silk sutures.

On March 5, ten days after the first stage, the second operation was done. The incision was made in the scar, and the sac was readily found with the aid of the black silk sutures that had been left in. The diverticulum was freed down to the neck, then split in half; the mucosa was dissected down to the base and cut off. A tube was passed through the nostril into the stomach, and a drain was placed down to the neck of the sac. The skin was closed with silk. The anesthetic used for both stages was nitrous oxide-ether. Wangensteen suction was employed for one day following the first operation. Fluids and St. Mary's formula were begun on the first postoperative day after each stage, being given through a Levine tube. The tube was removed on the fifth day after the second operation, and the giving of small amounts of fluid by mouth was started.

The pathologic diagnosis was esophageal diverticulum. The stratified squamous epithelium was slightly thickened, but the submucosa was normal.

Case 2. — S.W., a man aged 67, was admitted to the Evanston Hospital on Sept. 6, 1940. He complained of difficulty in swallowing, with regurgitation of the swallowed food, since 1930. At first there was difficulty in swallowing solid foods, and this condition gradually became worse. The patient consulted a physician in 1931, and a diagnosis of diverticulum of the esophagus was made. Surgical removal of the diverticulum was advised, but the patient did not consent to an operation. The dysphagia and regurgitation gradually increased until, in 1934, he was unable to eat solid foods. Since that time his diet had consisted of liquids and soft foods — raw eggs, milk and cream, orange juice and soups. On this diet dysphagia and regurgitation were less severe but persisted and gradually became worse, until at the time of operation the patient estimated that between 25 and 50 per cent of the food swallowed was regurgitated. This usually took place about an hour after ingestion. During the past ten years the patient's weight had decreased from 130 to 93 pounds.

The patient was a poorly nourished, poorly developed, asthenic man, weighing 93 pounds. The systolic blood pressure was 112 and the diastolic 70; pulse rate, 80; temperature, 98.6; hemoglobin, 81 per cent; erythrocytes, 4,760,000; leukocytes, 10,000; Kahn reaction, negative; urea nitrogen, 16.86; blood cholesterol, 244; urinalysis, negative. Roentgenographic examination after the giving of barium by mouth showed a diverticulum with a broad base in the middle third of the esophagus.

A two stage operation for removal of the diverticulum was decided upon. Dextrose and Ringer's solution was given intravenously for twelve days preoperatively. A Levine tube was passed into the stomach on the fifth preoperative day, and fluids and St. Mary's formula were introduced through it. On September 19 an incision was made anterior and parallel to the left sternocleidomastoid muscle. The superficial fascia of the neck was divided by blunt dissection; the carotid sheath and thyroid gland were identified, after division of the omohyoid muscle. The carotid sheath was retracted laterally and the thyroid gland medially; the adhesions about the sac were freed by combined blunt and sharp dissection. After the sac was freed it was tacked to the strap muscles of the left side of the neck with four black silk sutures. A rubber drain was placed down to the base of the sac, and the skin was closed with interrupted silk sutures.

On October 3, fourteen days after the first stage, an incision was made through the scar, the diverticulum was located and the surrounding adhesions were carefully dissected free. The base of the sac was found to be unusually large — about 3 cm. in diameter. The submucosa was carefully stripped from the mucosa, after the sac was opened, and the opening in the mucosa was closed by suturing after excision down to the level of the esophagus. A rubber Levine tube was passed into the stomach, a plain gauze drain was inserted down to the closed stump of the diverticulum and another into the lower end of the wound in the direction of the mediastinum. Several stitches with O chromic catgut sutures were taken in the superficial fascia, and the skin was closed with interrupted silk sutures.

For both stages avertin, 70 mg. per kilogram of body weight, was used as a basal anesthetic, and 1 per cent novocaine was used locally by infiltration and for superficial cervical nerve block. During the second operation a small amount of ethylene was also employed.

After the first stage, fluids were begun by mouth on the second day. Following the second stage a Levine tube was passed and liquids were given on the second day through it. The tube was removed on the fourth day and feedings by mouth were begun. The patient was discharged on October 14, eleven days after the second operation. At that time he was receiving a soft diet.

The pathologic report on the specimen was esophageal diverticulum with nonspecific granulomas in the wall.

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VASOMOTOR RHINITIS: A PHYSIOLOGIC AND PATHOGENETIC BASIS FOR THERAPY*

LOUIS ZOLO FISHMAN, B.S., M.D., M.S.
CHICAGO

"Empiricism" is preferred to designate the character of this clinical report of a highly effective, uncomplicated and inexpensive form of treatment† of so-called "Vasomotor Rhinitis." Certain histologic and neurophysiologic facts, because they represent "Science," will tend to mask the issue by rationalizing the technic to be described in the following pages. Too many patients are not relieved after submitting to innumerable tests and treatments which are in vogue clinically on the predication of their so-called scientific origins — particularly notorious in Allergy.

Such conditions hardly permit us to indulge in fancy procedures. For practical purposes, the choice of therapy is still "symptomatic" in form — in the writer's experience, "Local" and preferably qualified as being "Empirical."

An exhaustive survey of medical literature has been avoided, especially refraining from a recitation of an almost universal acquaintance with the many facts and theories of "Vasomotor Rhinitis."

Indeed, such a survey would undoubtedly reveal similar ideas reported long before the writer developed his method.[1] The therapeutic principles which support the feasibility of "Local therapy" — are old ones. Examples are in the early use of topical applications of phenol to the nasal mucosa and later, of galvanic currents through the medium of solutions of zinc chloride. The course of investigation continues to be one of replacing such exogenous conceptions of Vasomotor Rhinitis by more basic, or endogenous, determinations — to establish and to treat endocrine, psychosomatic and allergic dysfunctions instead of the nasal, or "shock," organ directly

Lastly, it is hoped that scientific displays and testimonial records will contribute to this clinical paper by their omission.

*Preliminary reports, beginning in 1933, at Conferences of the Department of Otolaryngology, University of Illinois College of Medicine and Research and Educational Hospitals, Chicago.

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SYMPTOMATOLOGY GOVERNING SELECTION OF PATIENTS

Conditions that are possibly etiologic factors receive attention only for the purpose of completing the history of each patient and for future reference.

Excessive sneezing, nasal blockage and hypersecretion — singly or in combination — are a basis for selection when perennial in character whether associated with "Hay Fever" or not.

Suppuration is absent.

Turgescence, especially of one or both inferior turbinates, is found usually in association with a *pale* mucous membrane; occasionally, with a diffusely *reddened* mucous membrane.

Hyperplastic changes of the nasal mucosa, when present, usually exist in the form of redundant tissue along the inferior turbinates; more extensive processes are seen as papilliform excrescences on one or more sites of the turbinates and/or septum.

TECHNIC

General remarks; sedatives; anesthesia. — There is a uniform reaction to treatment in that it is consistently followed by an increase in the symptoms — in varying degrees. This discomfort seldom lasts longer than twenty-four hours. Consequently, it is imperative to treat one side of the nose at a time and, for the first time, to do so moderately. If possible, that side is treated first which can be identified *by the patient* as causing the most discomfort. This particular procedure is explained to each patient before any treatment is begun to insure his confidence. At the end of the second or third week, both sides of the nose are treated during a single visit without causing a severe reaction. The intervals between each treatment range from four to seven days; they (treatments) commonly extend over a period of three to four weeks.

Phenobarbital was administered routinely by the writer at least 15 minutes before applying any local anesthetic. For the past year, *Seconal Sodium (Lilly), 3/4 to 1 1/2 grains, has proved to be more effective, acting within 15 minutes and lasting for about 2 hours. An Enseal of Ephredine Sulphate, 3/8 grain, combined with Seconal Sodium, 3/4 grain, (Lilly), is administered at the same time to control a possible reaction later in the day. Too, this barbiturate has little if any after-effect.*

Adrenalin chloride solution (1-1000) is applied (or sprayed) in sparing amounts only to that side which is to be treated. This is followed with a small amount of a 1% solution of cocaine hydrochloride in the form of a nasal spray. The mucosa of almost (See Interpretation, No. A) the entire nasal chamber is most thoroughly anesthetized with a 5 to 10% solution of Cocaine Hydrochloride (first, with a sparing quantity from an atomizer, followed by adequate applications with the same drug on moistened cotton — on *metal* applicators, as described below), depending upon the patient's threshold to pain. Not one case of cocaine intoxication has occurred to date. *A sterile syringe and an ampoule of Sodium Amytal (Lilly) 3 3/4 grs. to 7 1/2 grs. is always available and ready for immediate use, nevertheless.*

The objectives are two-fold in character: (1) To traumatize the surface of the mucous membrane in the region of the anterior portion of the middle turbinate, roof of the nose and adjacent areas of the septum by rubbing with a *cotton-tipped* metal applicator; (2) To apply a motion of massage — avoiding the technic of "traumatic-rubbing" described under (1) above — to the deepest structures of the inferior turbinates with the same type of applicator. The applicator is applied *firmly,* maintaining considerable pressure and, of greatest importance, fixing the end of the applicator to one spot at a time: anterior, middle and posterior points of the inferior and medial parts of the inferior turbinate. The motion of *deep* massage at the point of application is circular, horizontal or both in direction, in a more or less rhythmical steady movement for a period of about a minute to each of the six *arbitrarily* selected parts of the mucosa.

The metal applicator must be rigid to obtain the degree of pressure required.

COURSE

A. Immediate Effects

1. *First twenty-four hours.* — Depending as much upon the patient as upon the vigor of the

treatment he has received, their is, later, an increase in nasal blockage and paroxysms of sneezing; sometimes, moderate pain and headache. Such paroxysms should be mild in character! To avoid undue *thoroughness* which invariably produces such reactions at the beginning, the Rhinologist must — and can — determine the tolerance of each patient by the *reaction of his patient to the first treatment.*

A capsule of ephedrine sulphate combined with seconal sodium (or any similar barbiturate) is *dispensed,* to be taken later in the day if necessary.

It is essential to emphasize, and, therefore, unavoidably necessary to repeat, that the patient should be told to expect the reactions described above — so dismissing, quietly and effectively, any alarms from his mind when they occur. In no instance have any of these reactions lasted for more than twenty-four hours (See case described under Complications which may be considered as a minor exception). Otherwise, if the patient returns for a second treatment, he is too trusting or/and the Rhinologist, unusually endowed.

2. *After "first twenty-four hours."* — The greatest number of patients experience marked or complete relief from sneezing, from nasal blockage and, to a lesser extent, from hypersecretion. This effect is obtained in less than forty-eight hours and usually lasts for about three, four or five days, although to a lesser degree at this early time than when the series are concluded.

B. Schedule of Therapy; Duration of Relief

1. *Subjective Symptoms.* — About 4 weeks, consisting of 4 to 6 treatments suffice; usually, three for each nasal cavity.

The intervals of complete relief have varied from a few months to many years.

In cases of extensive hyperplastic changes of the nasal mucosa, particularly of the posterior portions of the inferior turbinates, the usual surgical and electrosurgical procedures are required before discharging the patient. At this time, grossly discernible areas of useless (hyperplastic) tissue are relatively minimal. The usual treatment, by galvanocautery or snare, is reduced in extent accordingly and is advisable to enhance the degree of improvement already experienced by the patient.

2. *Objective Symptoms.* —It is peculiar, and characteristic, that patients who respond well to treatment react almost monotonously in their similarity to each other, both in the sequence and chronology of events during the brief period of time required to obtain the desired effect.

Redundant and pale areas of mucous membrane (of the inferior turbinate or septum) become less redundant and red after the first *thorough* massage. The tissue is firm to touch (palpated with a cotton tipped metal applicator) and pink. Clinically, it may be considered that there has been a restoration or resumption of the physiologic activities of previously pathologic tissues. It needs but few experiences like this to demonstrate this conception to be reasonable.

Recurrences duplicate the "personality" of the past symptomatology and response to treatment "for each patient." These recurrences are commonly milder than before.

COMPLICATIONS (ABSENCE OF)

There have been no complications.

The procedure is intended to be traumatic and to produce superficial abrasions of the mucous membrane; later, ulcerations. These disappear quickly in the same uneventful manner as those which are caused by chemical caustics or galvanocauterization.

One case is of interest: A thick, diffuse, pseudomembranous coagulum appeared on the third day over the entire surface of the inferior turbinate. The coagulum loosened and was removed readily 5 days later. The underlying mucous membrane was grossly normal, recalling experiences during 1928 when zinc ionization almost became popular in the treatment of so-called "intumescent rhinitis."

The inferior half of the septum is never traumatized (see Interpretation: A), especially because of the possibility of producing an indolent, ulcerative process and possibly severe epistaxis by eroding the large vessels (usually venous) traversing just at this region: 1. Anteriorly, Superior Coronary or Nasopalatine; and 2. Posteriorly, Sphenopalatine.

INTERPRETATION

A. *Somatic++ sensory nerve ends.* — Neurophysiologic "facts" provide a ready explanation for the success of "mechanical traumatization."

For example, similar success can be had with any of a number of other methods. They are all destructive and certainly more drastic than the one presented here. Clinical practices and experiences with therapeutic and preoperative (local anesthesia) uses of all kinds of agents to disrupt the continuity of nerves, at any point in their course, are factual: That these common practices can be and have been reduced to a simple and *harmless* method — adaptable because of the accessibility of a region — is truly within the ordinary bounds of imagination!

Because the ethmosphenoidal recess and posterosuperior region of the nasal cavity are not concerned with the "sneeze-reflex," these areas have never been treated nor has there been any need to do so.

B. *Autonomic nerve supply.* — It will be conceded that massage of the inferior turbinate, as described, directly affects the submucous glands — as well as the superficially-placed goblet cells — the cavernous sinuses, lymphatic vessels, et cetera. These effects point to a process of restoration of the inferior turbinate to its "normal" appearance and function. *No attempt is made to identify the role of turbinal massage on the sympathetic and parasympathetic nerves controlling these functions.*

MISCELLANEOUS CONSIDERATIONS

A. *Submucous Resection.* — Massage of the inferior turbinate is of value in the treatment of dysfunctions of this structure following submucous resections of the septum. Most commonly the turbinate of the previously non-obstructed side becomes turgescent and obstructive, annoying both the patient and the surgeon considerably. "Massage" has served as a good substitute with its minimum amount of trauma for such popular methods still practiced as linear-streaking of the inferior turbinate with galvanocautery tips; it definitely facilitates without additional surgical measure, the process of adjustment in the physiology of the mucosa to a sudden change in the structure of the internal nose.

B. *Allergy.* — 1. "Perennial" allergens have not been used to test patients as a matter of routine; also, in a few instances in which a typically decisive history was obtained that paroxysms of sneezing were induced by drafts of cold air and/or by stepping (from bed) onto a "cold floor" in the morning.

The patients of the latter group *without exception,* were found to prefer warm baths — *a choice of general habit rather than of any association between cold baths and attacks of sneezing:* Daily, "terminal cold showers" were prescribed in conjunction with intranasal therapy, starting with an exposure of a few seconds to cold water at the conclusion of a warm bath (shock therapy). This time was increased daily by five or ten seconds — until one or two minutes could be tolerated. Only the earliest cases received the combined empirical and desensitization treatments due to the fact that "traumatic-rubbing and massage" therapy was at best a half promise of relief in the writer's evaluation of it; for quite some years, each patient's response was a new surprise to the writer — now, *almost* a matter of fact. Further, desensitization against this physical allergen, in addition to its prominent role in the patient's history, did not involve innumerable, time-taking and *expensive* preliminary tests nor any subsequent series of injection treatments. Despite its practical application, it was discarded later without detracting from the success of the empirical treatment. Consequently, no positive statement is available in this report concerning the merits of treatment of physical allergy (investigations reported by Dr. Irwin Spiesman, Maywood, Illinois) affecting the nose.

2. "Seasonal" allergens have never been used to test for coexisting Hay Fever; such a diagnosis was determined entirely by a patient's history.

One patient was treated with practically no success by the writer's method during the first few weeks of his yearly and quite severe attack of Hay Fever. On two occasions, there followed an aggravation in the symptoms. This case corresponds in its lack of improvement to those cases of Hay Fever in which all kinds of caustics to the nasal mucosa[2] have been tried.

C. *Endocrinology.* — Thyroid extracts were used in one case: a male patient, aged 40, who had an acutely beginning attack (his first) of Perennial Vasomotor Rhinitis in November, 1937. Both sides of the nose were extensively

occluded by a diffusely pale, water-logged mucous membrane. There were frequent, relentless paroxysms of sneezing and hypersecretion — day and night — despite all forms of intranasal therapy. Because of his moderate obesity, after many negative tests for allergic factors and despite 2 normal tests of his Basal Metabolic Rate, it was insisted that the Internist who had made these examinations administer thyroid extracts, "Empirically," to the patient.

The relief in the severity of the nasal symptoms was almost immediate and a "cure" was finally admitted after continued abeyance of symptoms for 4 or 5 months. On two occasions, when it was necessary to interrupt medication, the nasal disturbances returned. Later, in 1940, another severe episode occurred but ended within a short time to the same treatment.

D. *Psychosomatology.* — There is no need to introduce, other than to mention the increasing number of investigations of so-called Allergic states or dysfunctions — in this field, of Asthma and Hay Fever but not of Perennial Vasomotor Rhinitis — being reported by psychiatrists and psychoanalysts. More than a suspicion exists that Allergy, Endocrinology and Psychosomatology are integral units in the pathologic-physiology of this group at least.

The writer is impressed by the high degree of incidence of a multiplicity of "conflicting" situations and its enterprising associate, "Psychoneurosis" (high tension), among patients suffering from Vasomotor Rhinitis.+

SUMMARY

1. A practical method for treating effectively Perennial types of Vasomotor Rhinitis, without resorting to expensive or complicated tests and instruments, has been reported in detail.

2. Technic; immediate effects; absence of complications; duration of results: are described with the simplicity of the method itself.

Four cases are discussed briefly for their categorical values. All others — the basis for this report — have been presented, instead, as a group of selected cases which were found to respond uniformly and favorably in the experience of the writer.

3. Although it was thought at first to retain strictly the clinical and "empirical" design of this report by refraining from interpretive statements, some attention had to be directed to the closely allied matters concerned with Allergy, Endocrinology and Psychosomatology. The prospect that these will eventually become coordinated in evolving basic methods of clinical and practical value — more so than exists today — is decidedly promising.

CONCLUSIONS

It is too dogmatic perhaps to state that the above method is effective therapeutically with few exceptions; that it involves no danger of complications. But because there is no danger, plus the slightest expense and utmost simplicity in the technic, there should be no objection to a concerted study of the foregoing.

+Acknowledgement is gratefully made to Dr. Joseph C. Beck — by whose virtue of inspiring story-telling from an inexhaustible life-time of experiences — it was the author's privilege indeed (at one of these fascinating conferences in 1932) to receive an idea from "Dr. Joe" regarding Professor Canfield's (University of Michigan) experience with turbinal massage. It referred to a chapter on "Nasosexual Relations," in Parsons Schaeffer's book, "Nose and Paranasal Sinuses." Added to this, the writer's interest in Psychosomatic Medicine in Otolaryngology about which his case-presentations and discussions finally encouraged the recognition of the significant extent of interrelation between these branches of Medicine: The first patient upon whom the present method was used presented extensive hyperplastic changes of the nasal mucosa and symptoms of "Hyperesthetic Rhinitis" as well as admitting in the history a number of marital conflicts. With an idea of curiousity to observe personally any of the relationships and effects stated above, the writer massaged the inferior turbinates of this patient. Neither in this case nor in any other has such a relationship been observed grossly. But, in this case, as well as in subsequent cases after the manner described the nasal mucosa changed in appearance to quite normal and the symptoms were relieved.

++The term, "Somatic," is used in its clinical sense, rather than morphologic or physiologic, to identify it sufficiently from the "Autonomic" (nervous system).

1. "Massage" was included at the writer's suggestion to Dr. A. R. Hollender among his (A.R.H.) "Physical Therapeutic Measures in Otolaryngology," A. R. Hollender, Publ. C. V. Mosby Co., St. Louis, 1937, p. 179.
2. After discussing the present report with Dr. S. Pearlman of Chicago sometime ago, he suggested future studies regarding the limitations of the foregoing method: (1) in infants troubled with nasal blockage; and, (2) in patients suffering from Hay Fever. In the latter, Dr. Pearlman considered whether it might be possible to reduce the severity of symptoms of "Hay Fever" patients at the height of the pollen season by preseasonal "traumatic-rubbing and massage."

30 N. Michigan Avenue.

DISCUSSION

Dr. Samuel J. Pearlman, Chicago: Dr. Fishman asked me several weeks ago to discuss his paper, and I regret that in the interval I did not have sufficient time to try out a number of cases of my own, to prove the efficacy of his suggested method. Apart

from this, may I say the reading of his paper came as an agreeable surprise. We all know the increasing problem of vasomotor rhinitis. We all know that a fair proportion respond to usual methods, but certainly the work involved in testing by allergens is often great.

There are other methods we use — removal of polyps, metabolic investigations, elimination diets, etc., of which Dr. Fishman spoke. There nevertheless remains a fair proportion in which the most of the methods we use seem to fail. Furthermore, from time to time patients disappear from treatment and do not return for months or years. When they do, we are often surprised to find that the condition has disappeared spontaneously. There seems to be a fairly high incidence, as in asthma, of spontaneous recoveries.

Nevertheless, Dr. Fishman's method is refreshing and from this point of view, it is empiric. It is not wrapped in any theory. He merely gives us an example of what has been done in medicine throughout its history — "I do this thing, and I do not know why, but the patient improves." I am going to be interested and will try this method for myself, particularly because there are no unusual claims made for it. There are, of course, other methods of traumatizing the mucosa, and one may expect under all of these circumstances to see some improvement because of this traumatizing of the membranes in one way or another.

Dr. George Woodruff, Joliet: I would like to ask Dr. Fishman to outline his technic again.

Dr. Joseph C. Beck: — It would be a little unkind not to respond when Dr. Fishman called my name. I just walked in about that time and so I really did not hear the paper. From the discussion of Dr. Pearlman, however, I would like to have the chance to say something about the subject. I think Dr. Fishman's reference to me came from one of our conversations. A young woman was treated by a Rhinologist who massaged the turbinates for intumescent rhinitis and as a result of this treatment the patient became highly neurotic. The treatment was discontinued and the result of that treatment was practically negative on the intumescence.

Dr. L. Z. Fishman, Chicago (closing): I am most grateful to Dr. Pearlman for his interest and for his discussion of a sort of empirical thing, despite the fact that he was not given sufficient time in advance to make his own observations. We must recognize and commend Dr. Pearlman's open-minded attitude and his encouraging remarks today as a sharp contrast to that group of *clinicians* who affect "Therapeutic Nihilism" in order to play the role of *scientists* — in reality, a pseudoscientific pose.

I wish to thank Dr. Beck for relating the story that motivated this study in 1932. I had not intended to mention it until the moment when Dr. "Joe" entered during my presentation. As stated then, it is my privilege and pleasure to ackowledge Dr. "Joe's" responsibility for my interest — of which he is aware now for the first time. I hope that Dr. Beck will have no regrets. (The above circumstances will be added to the original manuscript). Unfortunately, Dr. Beck's story about "Nasosexual Relations" were never confirmed, because it would have been of considerable scientific interest to us. Dr. "Joe" — no danger exists, therefore, of providing these patients with a substitute for that biologic necessity to which you indirectly referred. Further, no addiction to cocaine is possible because, in no instance, has it been necessary to treat patients for more than a few weeks, *at intervals of 4 to 5 days.*

Dr. Woodruff's request to repeat the technic permits me to emphasize again that these details, from the experiences of a few who have used the method, must be decisive factors in the type of response obtained. For example, Dr. Irwin Spiesman has been able to obtain uniformly successful effects by using this treatment in selected cases of Perennial Vasomotor Rhinitis. A few of our younger members of the Department of Otolaryngology at the University of Illinois also report successes. On the other hand, Dr. Francis L. Lederer, Head of the above Department, has repeatedly told me of his failures with the treatment, particularly that his patients complained of a considerable amount of pain during the treatment. I use solutions of cocaine exclusively for topical anesthesia and do not conduct the various parts of the treatment for a *moment* when pain is experienced by the patient; certain patients, as we know, require more careful attention in obtaining local analgesia than others. Dr. Woodruff, "traumatic-rubbing" is restricted to the upper straits of the anterior half of the nasal mucosa, even approaching the roof of the nasal cavity when marked septal deviations are not present to prevent the latter. Each of the points to be treated, as described, requires about one-half minute. The mucosa of the inferior turbinates is *not traumatized* except at the few small points where the applicator is applied firmly and with considerable pressure against the turbinal bone. When "massage" of the mucosa is actually being executed, it will be seen to "wiggle" for a considerable length of the turbinate. When this movement is not elicited, either the technic is faulty or the mucosa is firm and therefore does not require the type of treatment which is being used to reduce turgescence and/or *grossly* hyperplastic tissue.

Well done is better than well said.—*Benjamin Franklin.*

RATIONALE OF INTRAVENOUS FLUID THERAPY

Armando J. Rotondi, M. D.
CHICAGO

Seventy per cent of the body weight consists of water and although nature never intended that man should be watered and fed by the vein when his bodily functions are normal, the ability to supply water, food or drugs by vein when needed constitutes one of the most significant advances in modern medicine. The use of intravenous infusions is not a modern procedure. Historically it anteceded the development of hypodermic injection. The first intravenous injection in man appears to have been performed by Sir Christopher Wren, in 1657. By means of a quill attached to a small bladder, he injected vinum emeticum into the vein. In 1668, several other physicians[10] reported the use of intravenous injections with a great variety of drugs, but these were followed by accidents, with the result that the practice fell into disrepute. At the beginning of the nineteenth century, interest in the subject was renewed and from 1802 to 1822 there was a periodical devoted exclusively to intravenous therapy. The boldest investigator of this period was Hale, who succeeded in injecting into himself intravenously half an ounce of castor oil. Fortunately, he survived, and came to the conclusion that all intravenous injections should be abandoned. In 1830, Joenichen is said to have been the first to use saline solution intravenously, and in 1891 Matas reported a series of cases of shock and hemorrhage in which the intravenous use of saline solution proved to be of some value. During World War I, the intravenous administration of fluids came into general use and since 1920 has become the method of choice of administering fluids on the majority of surgical services. But notwithstanding its widespread use in the past two decades, certain questions, especially as to the amount of fluid to be administered, the type of fluid to be used, and the rate of injection have been the subject of controversy, much of which could be settled by application of the knowledge of water metabolism. Therefore, before considering the water requirements of the sick patient, the type of fluid suited to each patient and the indications for intravenous fluid therapy, it is proper to review briefly a few basic physiologic facts concerning the metabolism of water.

Water Metabolism. — The modern conception of water metabolism centers about the term water balance. By this is meant the ratio of water which enters the body to the total amount of fluid which leaves the body. Under normal conditions, water becomes available from the fluids drunk and the food eaten. Fluids drunk vary from 800 to 2000 cc. per diem. The water in the food is derived from two sources, the actual content of water in the food itself, which on a routine maintenance diet equals 1000 cc. or 70 per cent of the total weight of the food, and the water formed as result of the oxidation of foodstuffs, which averages 500 cc. In other words, each gram of solid food ingested yields approximately 0.9gm. of water or about 1 cc. of water per calorie of food intake.

Loss of water from the body takes place by three mechanisms, namely, it is excreted by the kidneys, it is vaporized by the skin and lungs, and it is eliminated through the intestine. In the absence of diarrhea the fluid loss in the stools is negligible since it does not exceed 150 cc. daily. When it is realized that the upper half of the gastrointestinal tract receives fluid secreted as saliva, gastric juice, bile and succus intericus in the volume of 7000 to 10,000 cc. in twenty-four hours, the loss of scarcely 150 cc. of water in the feces demonstrates the indispensable function performed by the lower portion of the gastrointestinal tract.

The water lost from the skin and lungs varies with the temperature and the relative humidity of the atmosphere, and, with the extent of physical activity indulged in by the individual. In comfortably cool surroundings, the vaporation through invisible perspiration from the skin and the exhaled air from the lungs varies from 1000 cc. to 1500 cc. daily, which has been estimated[9] to be equivalent to 25 per cent of the dissipated body heat. The remaining 75 per cent of the body heat is dissipated by radiation, conduction and convection from the body surface, but the effectiveness of such mechanisms steadily decreases as the temperature of the environment increases. Thus in hot and humid surroundings the skin and lungs dissipate more than 25 per cent body heat which means that more than 1500

From Loyola University School of Medicine and St. Bernard's Hospital, Chicago.

cc. of water is lost by vaporization. This phenomenon is explained by the fact that the process of vaporization is affected very little by the amount of water available. The thermal regulatory mechanism utilizes whatever amount of water is needed to maintain continuous vaporization with the result that if water is deprived for long periods of time, the urine output is diminished or may cease although some water continues to be vaporized from the skin and lungs. Since the vaporizing process takes precedence over the urine output, a small volume of urine of high specific gravity indicates insufficient water. Normally the kidneys excrete 1000 to 1500 cc. of water daily, depending somewhat on the amount of excess fluid available and upon the quantity of waste material to be excreted. When the renal function is normal, an output of 500 cc. of urine in twenty-four hours may suffice to excrete 35 gm. of waste products, which is the minimum daily amount placed for removal by the kidneys.[6] One gram of waste material needs 15 cc. of urine with a specific gravity of 1.031. When the renal function is impaired as shown by scanty urine of low specific gravity (1.010 or lower), proportionately larger quantity of water is needed if retention of waste products is to be prevented. In other words, as the concentrating capacity of the kidneys decreases, the volume of urine should increase. For all practical purposes, a urine output of 1500 cc. in twenty-four hours will usually take care of the excretion of waste products by kidneys of all ranges of function. In the absence of diseases of the kidney or urinary tract, the so-called toxic suppression of kidney function not infrequently represents an abnormal reduction in the available water.

Water Requirements. — Coller and Maddock have shown that to provide water for vaporization and a good urine output an uncomplicated surgical patient requires approximately 2500 cc. of water in twenty-four hours, 1500 cc. for vaporization and 1000 cc. for urine formation. If the weather on the day of the operation is particularly hot, loss of water by these routes may be even greater. In the patient with fever, sepsis, or hyperthyroidism loss of fluid by evaporation is increased to about 2000 cc. per day. Moreover, the septic patient should excrete more waste material and the volume of urine should, therefore, be 1500 cc. making a total of 3500 cc. of fluid that must be supplied. Other losses of water may occur by abnormal routes, such as vomiting, gastrointestinal drainage (Levine tube, Wangensteen suction), hepatic bile, intestinal fistula, suppuration or loss of blood during operation all of which may average another 1000 cc. Thus the total loss of fluids may reach 4500 cc. If in addition to this the patient were dehydrated before operation, an even larger amount of fluid would be required. Usually the common clinical signs of dehydration are not manifest until the depletion of water amounts to 6 per cent of the body weight. For example, if the dehydrated patient weighs 55 Kg. (121 lbs.), the water requirement for the first twenty-four hours would be 6 per cent of 55 Kg. or 3,300 cc. of water in addition to the basic requirement of 3,500 cc. for vaporization and urine formation, which would make a total of 6,800 cc. The water constituting the 70 per cent of the body weight is divided as follows: 45 per cent in the intracellular fluid, 16 per cent in the intercellular fluid and 9 per cent in the blood. In dehydration, the fluid content of the intercellular spaces is the first to be affected. A marked diminution of the interstitial fluid causes a breakdown of body tissues with the result that the patient loses weight, feels thirsty and exhibits such clinical signs as dry buccal mucous membranes, dry hot skin, a beefy tongue, sunken eyes, slight fever, and oliguria. If the breakdown of body tissues fails to provide enough water for the maintenance of a normal volume of circulating fluid, the decreased circulatory flow causes a disturbance in the acid base equilibrium, an increase in the non-protein-nitrogen of the blood, cyanosis and other evidences of toxemia. It is not surprising then, that several liters of fluid are required within the first twenty-four hours by the severely dehydrated patient. Once the internal chemical balance has been restored, 2500 cc. of fluid will be sufficient to maintain a normal water exchange. The amount given should depend upon an accurate appraisal of each patient's requirement. In patients over 60 years of age, the quantity of fluid should be somewhat less than the total amount calculated in terms of body weight because their cardiovascular apparatus is not likely to tolerate much fluid well, especially if pulmonary congestion is

present. In children, on the other hand, there is a greater susceptibility to the deleterious effects of dehydration not only because they have a greater percentage of water in the body as a whole, but because they have a relatively larger volume of intercellular fluid. The younger the child, the greater may be the loss of fluid in terms of per cent of body weight. For infants of two years of age or less with symptoms of moderate dehydration, as much as 100 cc. of water per kilogram of body weight may be required to restore the fluid balance, while in children more than 3 years, 40 cc. per kilogram of body weight may be adequate. Naturally, these values are only approximations and achievement of a satisfactory state of fluid balance must be determined clinically.

TYPES OF FLUID AND THEIR EFFECTS

Normal Saline Solution. — One thousand cubic centimeters of normal salt solution contains 8.5 gm. of sodium chloride and the average daily ingestion of this salt varies from 6 to 10 grams. Therefore, if 3500 cc. of isotonic saline is administered in twenty-four hours, the patient receives close to 30 gm. of sodium chloride or three to four times more than its normal daily intake. While such large amount of salt is easily excreted by healthy individuals, in a postoperatively sick patient it may be harmful to the kidneys. Aside from the possible impairment of renal function, the intravenous administration of superfluous amounts of salt solution by diluting the colloids in the blood stream, may cause a decrease in the osmotic pressure and an increase in the hydrostatic pressure with the result that salt is diffused into the tissues and excessive water retention occurs. The reason why postoperative edema is not so commonly observed is because the patient who undergoes an ordinary major operation is usually given saline infusions for a day or two only, but if, either on account of a stormy and prolonged convalescence or other reasons, intravenous therapy with saline solution is continued for three or four days, subcutaneous edema may be noted, especially in the region over the back. In the presence of prolonged starvation, general malnutrition, sepsis, serous drainage, severe hemorrhage, malignancy of the gastrointestinal tract or impairment of the hepatic function, edema may occur from nutritive deficiency. This is especially true if the plasma protein concentration falls from the normal of 7 to 7.5 gm. per hundred cubic centimeters to 2.5 per 100 cc. for serum albumin and 5.5 or lower per 100 cc. for serum protein.[8] Nevertheless, sodium ions and water must be present in order for edema to develop. Keith has shown that it is not the chloride but the sodium radical that causes water retention and that if sodium is substituted by potassium, edema does not occur. So far, however, the general use of simple potassium chloride solution for intravenous fluid therapy is not recommended. From the foregoing statements regarding sodium chloride, it should not be inferred that the parenteral use of normal salt solution should be discarded. However, the widespread tendency to employ intravenous saline infusions routinely regardless of whether or not electrolytes are needed should be discouraged.

The intravenous use of saline solution should have more or less specific indications and of these there is a considerable number, medical as well as surgical. High intestinal obstruction, persistent vomiting from any cause, acute gastric dilatation, gastric or duodenal fistulae, frequent gastric lavage, severe diarrhea, dysenteriae, pneumonia, Addison's disease, profound heat exhaustion and prolonged induced fever therapy are usually associated with a dehydration in which abnormal loss of chloride is a notable feature. To ascertain the existence of hypochloremia it is unwise to wait for the manifestation of its symptoms — drowsiness, weakness, fatigue, anorexia, nausea or stupor. Blood chemistry studies of the plasma chlorides usually help to arrive at a more accurate estimate of the electrolytes lost and, therefore, serve as a guide in determining the quantity of sodium chloride to be supplied. While it is difficult to lay down hard and fast rules to cover the proper administration of saline solution to all patients, investigators have shown[1] that for each 100 mgm. of plasma chlorides below the normal level (540-640 mgm. per cent), the patient should receive 0.5 gm. of sodium chloride per kilogram of body weight. For example, if the plasma chloride is found to be 440 mgm. per cent and the patient's weight is 60 kg., the calculation is made by multiplying 0.5 by 60 which equals 30 gm. of sodium chloride required. Repeated studies have shown that the administration of salt in greater amount than that provided by this rule will not elevate the level of

plasma chlorides materially but simply predisposes to the development of edema. This mathematic formula based on the observation of the plasma chlorides is especially valuable when considerable loss of gastro-intestinal secretions has occurred previous to admission to the hospital. In the hospital, the amount of secretions lost from the gastrointestinal tract can be measured and the sodium chloride and water replaced on a volume for volume basis with normal salt solution or preferably Ringer's solution, which is more nearly physiological compatible with blood. Ringer's solution is composed of 0.7 percent NaCl, 0.03 per cent KCl and 0.025 per cent $CaCl_2$. Because of the presence of small amounts of KCl and $CaCl_2$ there are a few less sodium ions in Ringer's solution than in normal saline which is 0.9 per cent. However, since the NaCl content in the vomitus and other gastrointestinal secretions lost is less than the amount present in an equal volume of normal saline or Ringer's solutions (see Table I.) and since the loss of chloride ions is generally greater than the loss of sodium ions, the replacement of electrolytes based on observation of the blood chlorides is a more accurate method and if properly utilized the probability of waterlogging the tissues with saline solution is avoided. In patients suffering from severe burns, even in the absence of clinical evidence of shock, the plasma chlorides often remains much below the normal level despite the administration of relatively large quanities of saline solution.

TABLE I. CONCENTRATION OF SODIUM CHLORIDE IN VARIOUS FLUIDS LOST

	Variation in NaCl Conc. Gm/Liter	Average NaCl Conc. Gm/Liter
Vomitus	1.2-6.2	3.3
Gastroduodenal drainage (Wangensteen suction)	1.9-7.9	5.7
Hepatic Bile	3.5-6.4	5.1
Intestinal fistula drainage	3.0-8.8	5.2
Diarrheal stools	3.7-5.2	4.3

Solution of Glucose. — Inasmuch as dehydration is more often associated with certain degree of starvation and ketosis rather than a hypochloremia, the likelihood of giving too much salt can be avoided by using half of the required amount of fluid as 5 per cent glucose in sterile distilled water. Five per cent solution of glucose supplies the necessary water and quickly available food. One thousand cubic centimeters of 5 per cent glucose yields 200 calories, and although such caloric value even if repeated three times a day would be far below the number of calories needed to make up the average daily energy requirement for an adult, in most instances of starvation it is sufficient to prevent ketosis. Besides starvation, impoverishment of hepatic glycogen is known to occur in any lesion of the gall bladder or liver, with or without jaundice. For this reason, intravenous infusions of 5 or 10 per cent glucose are not only indicated but almost indispensable both before and after operations on patients with long-standing diseases of the biliary tract. The same can be said in cases of thyroidectomy. In fact, there are very few surgical conditions in which the generous intravenous use of glucose is more important than thyrotoxicosis. In the absence of chloride loss, as by repeated vomiting, diarrhea or other abnormal routes, 5 per cent glucose in distilled water rather than in normal saline solution is better. Five per cent glucose solution alleviates thirst more readily than normal salt solution because glucose is quickly oxidized in the liver and releases water whereas sodium chloride tends to bind water. Notwithstanding the desirable properties of glucose it must be remembered that metabolic balance cannot be maintained very long by the intravenous administration of glucose, salt or any other intravenous solutions, so that patients must have food by mouth at the earliest possible time. When the patient is able to drink fluid, intravenous solutions are unnecessary. The idea of supplying more food by administering glucose solution of higher concentration than 10 per cent is not well founded because its diuretic effect may delay the restoration of fluid balance. Hypertonic solutions of glucose have a definite use, but it is rather limited. In certain brain injuries,[4] in the presence of edema, oliguria, anuria, or azotemia, solutions of 20, 25 or even 50 per cent glucose intravenously are specifically indicated. In the management of patients suffering from coronary occlusion with myocardial infarction, repeated intravenous injections of concentrated glucose solution may be helpful in relieving the dyspnea which is due to a diminution of glycogen content in the myocardium as well as to anoxemia.

Alkaline Solutions. — When dehydration is associated with severe acidosis, sodium r-lactate, one-sixth molar solution as such or combined

with Ringer's solution is better than normal saline or five per cent glucose solutions, either alone or in combination. It can be calculated that each 60 cc. of one-sixth molar sodium r-lactate per kilogram of body weight may increase the sodium ion concentration of the blood plasma about 14 millimols (mM) per liter. This corresponds to a rise in the bicarbonate concentration sufficient to yield an additional 33 volumes of carbon dioxide per hundred cubic centimeters of blood plasma. Thus racemic sodium lactate neutralizes acidosis more satisfactorily by virtue of the fact that after being metabolized in the body, it is gradually converted into sodium bicarbonate. However, the treatment of acidosis, even if moderately severe, is not by the administration of sodium bicarbonate solution intravenously, as might be expected. Indeed, this form of therapy is really dangerous because of the likelihood of bringing on a fatal alkalosis.[11] This is particularly true in children who may be in acidosis but who have also suffered a loss of base from the excretion of sodium in the urine and stools. Similarly, if the acidotic state has been associated with vomiting, there may be a coincident depletion of blood chlorides and consequently the administration of alkali intravenously would neutralize the ketones and quickly produce alkalosis. In view of these facts, sodium bicarbonate should not be administered intravenously except when the carbon dioxide combining power of the blood has fallen to 20 volumes per cent or lower. At this level a single intravenous injection of 500 cc. of 5 per cent sodium bicarbonate may be tried with little or no risk of producing alkalosis. In alkalosis resulting from intravenous injection of sodium bicarbonate or from vomiting in which there is loss of chlorides and marked dehydration, the patient should receive intravenous infusions of normal saline or preferably of one per cent sodium chloride solution until the acid base equilibruim is restored to normal. Success is dependent upon the ability of the kidneys to selectively excrete the excess base as bicarbonate, and not as chloride, until the acid base balance is reestablished. Intravenous injection of a 5 per cent solution of calcium chloride should be reserved only for patients in whom the alkali excess has reached the stage of causing tetany. In both, acidosis and alkalosis, the treatment of the underlying conditions is of prime importance. Therefore, the management of diabetes, urinary obstruction, anoxemia, circulatory failure, emphysema, morphine poisoning, sulfonamide excess and other probable causes of acidosis is indispensable. If alkalosis is due to excessive alkali ingestion, as in peptic ulcer, obviously the alkali should be discontinued.

Blood Plasma, Serum, Etc. While isotonic solutions of saline or glucose intravenously are indicated to prevent shock which may result from a severe dehydration, in shock due to hemorrhage or trauma these solutions of crystalloids may have an unfavorable effect because the volume and concentration of the plasma, already lowered as a result of concomitant damage to the endothelium of the capillaries, may be further decreased as the plasma proteins is rapidly extravasated along with the injected fluid into the intercellular spaces.[3] This is reflected by a rise in the hematocrit (hemoconcentration). Under these circumstances blood plasma or blood serum is ideal. Properly prepared human blood plasma can be given with no fear of serious reactions and without typing or cross-matching the blood of the recipient. Desiccated plasma is stable for long periods of time and the administration may be immediately undertaken by simply mixing it with pyrogen-free, sterile, distilled water. Restoration with whole blood is contraindicated in shock not accompanied by hemorrhage because the extra blood cells so supplied add to the hemoconcentration. Blood plasma is also useful in the treatment of the nephrotic syndrome which is characterized by edema and hypoproteinemia. For many years 6 per cent acacia solution was singled out as a suitable substitute for blood but subsequent experience revealed its shortcomings. Solutions of isinglass, pectin and gelatin have now been tried but experience with them has been rather limited.

PRACTICAL CONSIDERATIONS

Besides the quantitative and qualitative aspects of fluids, intravenous infusions involve certain practical considerations. Next to the adequate precautions in the preparation of the solution and apparatus, the responsibility of which is now largely carried by reliable commercial firms, the rate of injection is very important.

For simple fluid replacement, 50 to 80 drops per minute are well tolerated. This rate equals 300 to 500 cc. per hour and easily permits the administration of 2000 to 3500 cc. in a few hours. The estimated amount of fluid should be given preferably during the day so the patient is not disturbed in the course of the night. Except in cases of traumatic shock or hemorrhage in which prompt restoration of an effective circulating volume is desirable, intravenous fluid should not be administered too rapidly as it may cause acute cardiac dilatation, especially in patients with a cardiac defect. When using 10 per cent glucose, a slower rate of from 30 to 50 drops per minute (200-300 cc. per hour) increases its utilization and minimizes the "spilling over" into the urine. Hypertonic solutions of glucose frequently cause phlebitis or thrombosis at the site of injection. This is also an important consideration when repeated injections are necessary over a long period. The frequency of venous thrombosis following venipuncture may be appreciably reduced by injecting a few cubic centimeters of normal saline through the same needle in which the hypertonic glucose solution has been administered. If the venipuncture is rendered difficult on account of unusually small veins, a hot moist pack covering the arm, wrist and hand about half an hour before performing the injection may facilitate the procedure. Fortunately, the method of giving intravenous fluid by continuous infusion for twenty-four or forty-eight hours[7] has been practically discarded because it often caused a depletion of the plasma proteins, thrombosis and fatal embolism. A well spaced schedule of interrupted infusions of 1000 cc. is much safer.

SUMMARY

1. Extensive studies of the mineral and water metabolism of the body have made possible the safe and rational intravenous administration of relatively large amounts of fluid.

2. Dehydration, the most important indication for fluid therapy, may result from numerous causes, and the fluid requirement of every patient should be calculated and considered individually.

3. The intravenous use of saline or Ringer's solution is specifically indicated when the serum electrolytes is depleted, as by repeated vomiting, diarrhea, or other abnormal routes, but contraindicated over any prolonged period because of their tendency to produce edema.

4. In the absence of hypochloremia, the fluid of choice is a 5 per cent glucose in sterile distilled water.

5. In the treatment of dehydration associated with marked acidosis, the acid base balance can be more safely re-established by sodium r-lactate one-sixth molar solution as such or combined with Ringer's solution rather than sodium bicarbonate solution intravenously.

6. In the presence of circulatory failure due to reduction of blood volume, crystalloid solutions such as saline and glucose may not be relied on because they diffuse readily from the circulation. Under these circumstances the timely administration of plasma has a definite place in the armamentarium of intravenous fluid therapy.

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When Charles F. Kettering was doing research for the National Cash Register Company, he estimated that a certain project would require a year for completion. When asked to double his force and reduce the time to six months, his reply was: "Do you think that by putting two hens on the nest a setting of eggs could be hatched out in less than three weeks?" —*Peabody Journal of Education.*

OSTEOCHONDROSARCOMA OF THE BREAST

S. J. Sullivan, M. D.
CHICAGO

Osteochondrosarcoma of the Breast is one of the rarest of all malignant tumors. Sailer[1] submits a resumé on carcomas of the breast from St. Luke's Hospital in New York and shows a ratio of one carcoma to 125 carcinomas; however none of his cases included an osteochondrosarcoma. William Battle[2] reported the first case in 1886 and the latest was reported by Freshman and Kirkland[3] in 1940. Raso[4] and Buser[5] both add to the present literature in reporting true osteochondrosarcomas. Some thirty cases of chondroid or osteoid types have occurred in the literature but probably only seven or eight of this mixed type have been reported.

CASE REPORT

Mrs. S. 43 years of age the mother of six children, the youngest less than one year of age, noticed a small hard nodule in her left breast about July 4th, 1941 following a severe contusion to this area. On October 4th, 1941 the breast was examined and a freely moveable mass was found in the upper outer quadrant about the size of a small hen's egg. The tumor was enucleated on Oct. 6th and a radical mastectomy was done on Oct. 8th. In gross, the specimen measured 7 x 5 x 3 centimeters which was extremely hard on section. There was a small cavity with a trabeculated lining near the center.

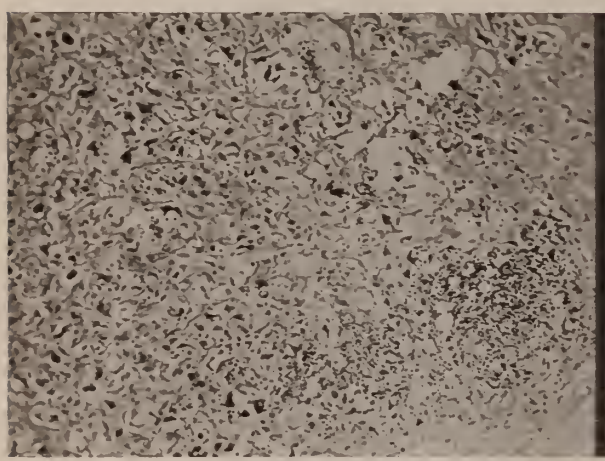


Figure 1

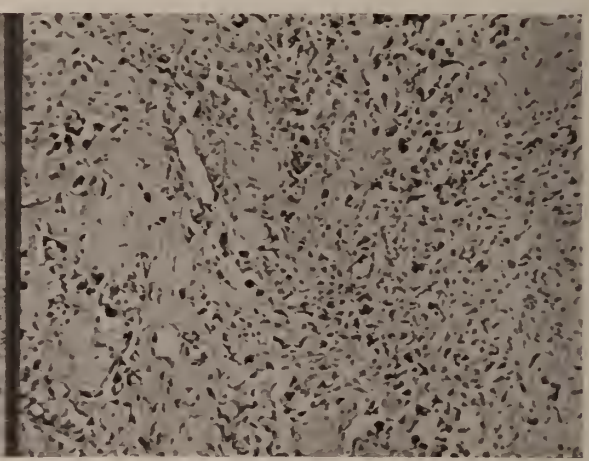


Figure 2

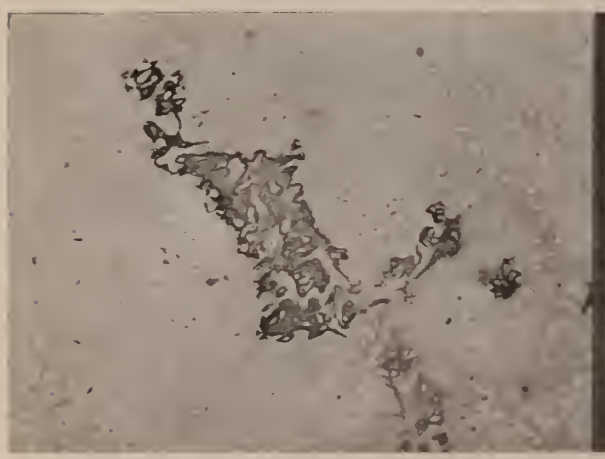


Figure 3

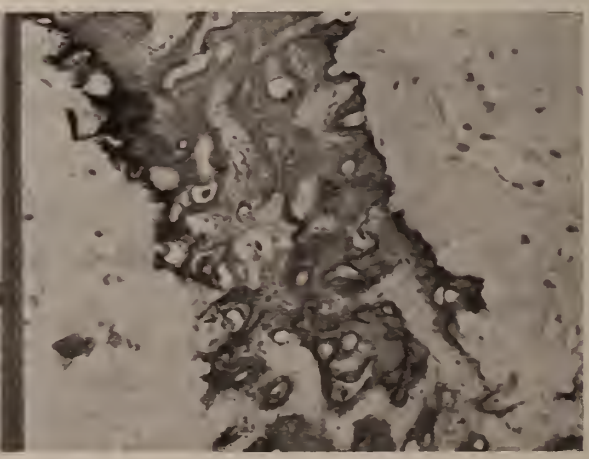


Figure 4

Figure 1. Periphery of mass with gland like spaces. Giant cells and collections of round cells. Hamatoxylin and eosin X125

Figure 2. Sarcomatous area with cartilaginous tissue. Hematoxylin and eosin X150

Figure 3. Deposit of calcium suggesting osteoid tissue embedded in cartilaginous matrix. Hematoxylin eosin X125

Figure 4. Osteoid tissue. Hematoxylin and eosin X375

Microscopic Description—Sections at the junction of the tumor with the remaining breast tissue reveal an abrupt transition with very little evidence of encapsulation of the tumor. The acini of the adjacent breast tissue are surrounded by a loose appearing myxoid tissue containing many round cell collections. The tumor tissue in places abuts on, or merges with, this myxoid stroma. Immediately adjacent to the transition point the tumor tissue is composed of numerous oval, spindle or polyhedral hyperchromatic cells in a hyaline matrix. Occasional multinuclear cells are noted. Some areas suggest acinus formation. In sections from deeper parts of the tumor fewer cells and greater amounts of hyaline stroma are noted with occasional collections of mucocollagenous tissue. The tissue is mostly acidophilic but occasional small areas of basophilic reaction are noted. These latter areas are considered to be cartilage. Deposits of calcium in several regions give the appearance of osteoid tissue.

DISCUSSION

In the majority of reported cases trauma seems to be the exciting agent as is quite apparent in this case. Females past the third decade have been affected in all reported cases.

The lymphatic glands examined showed no evidence of sarcomatous change. Therefore a complete recovery may be expected because the progress of extension is probably by continuity along the facial planes rather than by metastasis via the lymphatics or the blood stream.

Metaplasia or the transition of one tissue into another seems to offer the most plausible if not the true histopathogenesis of this type of breast tumor. Therefore the transition of connective tissue into giant cells and round cells at the periphery of the tumor and a gradual extension toward the center of sarcomatous and cartilaginous tissue and finally osteoid tissue near the center leads to our present supposition.

SUMMARY

1. An exceedingly rare type of breast tumor is presented which contained round cells in myxoid stroma, spindle cells, hyaline and mucocollagenous tissue and osteoid tissue or an osteochondrosarcoma.

2. Metaphasia is offered as a possible basis for the unusual histopathogenesis.

3. A complete recovery is looked for because of the probable means of extension and the type of surgery done.

2630 E. 75th Street

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TETRACAINE SPINAL ANESTHESIA

A Review of 100 Cases in Private Practice

SIDNEY W. RAMOND, B. S., M.D.
CHICAGO
West Suburban Hospital
Oak Park, Illinois

Spinal anesthesia has become an accepted procedure and the reason for presenting this paper is to call attention to the use of tetracaine, a drug which is widely used in the eastern states but is little known in the central states.

Advantages—The principal advantages of tetracaine over procaine in rachianesthesia are: long duration of action and slight effect on blood pressure. It possesses, in common with all other spinal anesthetics the usual advantages over general anesthesia, namely: less toxicity, less shock, greater relaxation of abdominal muscles, increased tonus of intestines, less post-operative pain and vomiting, ability to take fiuids by mouth during and immediately after operation, and fewer pneumonias and atelectasias; it permits operating on patients whose pulmonary and cardiac conditions would not stand a general anesthetic.

Contra-indications—Spinal anesthesia has certain well known contra-indications. It is unsuitable for young children and those who have scoliosis, arthritic spines, meningeal irritation, shock, or infections over the spine. To these usual contra-indications should be added one other:—operations on the pregnant uterus. Here the relaxation leads to greater than normal hemorrhage.

General Considerations—

1. Dosage. The dose will depend mainly upon the level of anesthesia desired. The weight of the adult patient is of very little importance. For perineal or leg work fifteen milligrams of tetracaine are used, for all other abdominal work up to and including operations against the diaphragm, twenty milligrams will suffice. The dose is reduced only very slightly for smaller than average individuals.
2. Toxicity. No satisfactory method has yet been devised to determine the true toxicity of this drug. It is obvious that a lethal dose at the vital centers is only a therapeutic dose at lower levels. The giving of toxic doses intravenously cannot be used as a criterion of safety in the thecal canal.
3. Form of Preparation of Drug. Tetracaine is available in two different forms one being a one percent solution in two c. c. ampules the other a niphanoid crystal. A third form, a one-half percent solution was recently tried out but was unsatisfactory. The results herein recorded were all obtained with the one percent solution.

Pre-medication—The proper preparation of a patient for operation is of utmost importance. The night before operation six grains of sodium amytal are administered. The morning of operation one-sixth grain of morphine with one one-hundred fiftieth grain of scopalomine two hours and again one hour before operation are given.

Technique of administration—For perineal and lower extremity work the interval between the fourth and fifth lumbar spaces is selected. For pelvic work the interval between the second and third lumbar spaces is used and for all other work the interval between the twelfth thoracic and first lumbar or first and second lumbar are chosen.

The puncture is performed with the patient lying on the side. An important point in technic is to keep the shoulders perpendicular to the table while curving the spine. Some operators have the patient lie on the abdomen for ten minutes after administration in order to allow it to "float" to the sensory roots: this is unecessary.

Before making the injection the site is prepared as for any other operation, then fifty to one-hundred milligrams of ephedrine hydrochloride dissolved is one or two c. c. of one percent procaine solution is injected into the skin and subcutaneous tissue. The spinal needle is inserted and after a free flow of spinal fluid has been obtained the tetracaine solution is injected. Originally, considerable barbotage was practiced but more recently only a slight amount and in some cases none has been used. The best anesthesia is obtained where little or no mixing is employed and the injection is made fairly rapidly (about five seconds).

Following the administration of the drug the patient is at once turned on his back unless the dorsal position is desired. Anesthesia is complete in eight to ten minutes; then for fifteen minutes the table is kept flat and no pillow is permitted under the head. After this, any position may be used. From the start the anesthetist records the blood pressure every five minutes and reports on it if at any time it drops more than twenty millimeters of mercury under the normal for that individual.

A nasal catheter is inserted just inside of the nostril and pure oxygen is administered at the rate of three to five litres per minute. Any discomfort ordinarily encountered with spinal anesthesia is due to anoxemia of the peripheral tissues. The administration of oxygen overcomes this, and, since its introduction, it is rare to have a patient complain of any feeling of suffocation or nausea. If either of these symptoms are noted the anesthetist increases the flow of oxygen to five or six litres per minute for a few minutes.

Certain stimulants must be present. This applies to all anesthetics. A sterile syringe and needle should be ready with one ampule each of coramine, epinephrine and ephedrine hydrochloride. In this group of patients it has only been necessary to resort to stimulants twice.

The ages of the patients covered in this report varied from fourteen to seventy years. The lowest first blood pressure recorded (before giving ephedrine) in any case was ninety, the highest was two-hundred. The time for which blood pressure readings were taken at five minute intervals varied from twenty minutes to two hours and fifty-five minutes. The duration of

actual operation varied from ten minutes to two hours and forty-five minutes. There was one chest operation, twenty-seven upper abdominal, seventy lower abdominal and two lower extremity.

Exact records of the blood pressure were kept at five minute intervals in the last seventy-eight of one-hundred consecutive anesthesias. The lowest that any blood pressure dropped to during operation was seventy-eight millimeters, the highest that any of them rose to was two-hundred and twelve millimeters. The greatest drop of blood pressure in any one in this group was thirty millimeters of mercury which occurred ten minutes after the anesthetic had been given. No treatment was given and the blood pressure steadily rose, ending at ten millimeters of mercury above the starting pressure.

As to post-operative complications they were as follows: atelectasis and pneumonia none. Deaths—three. These were in no way attributable to the anesthetic, one patient who had a cholecystectomy died on the twelfth day of myocarditis, one patient who had a gastric resection died on the fifth day of myocarditis, and one patient who had acute cholecystitis died on the fourth day of cholemic coma; post-mortem examinations were obtained in each case.

Headache of any marked degree has occurred only once. Peculiarly enough, it was in a patient operated for bunions. She received a smaller dose of tetracaine than usual and her position was not changed on the operating table. Backaches have been absent. This compares very favorably with the fifteen to twenty percent who complain of severe backaches after general anesthesia. There was a noticeable absence of nausea and vomiting in all of this group, only six having any emesis recorded.

Spontaneous peristalsis has been present in all cases except in the patient who died of cholemia. As a routine, a one pint saline or soapsuds enema has been given on the second post-operative day and this has invariably been sufficient to permit evacuation. Difficulty in urination was encountered once. This was following a herniotomy and is of course a common occurrence in this operation.

It has been necessary to supplement the anesthesia in two cases, both of which were prolonged and difficult operations. One case was a combined abdominal-perineal-rectal-resection; the other was a resection of the terminal ileum, cecum, ascending colon and half of the transverse colon. In the first of these cases a supplemental anesthesia was not necessary because of any pain of operation but purely from discomfort to the patient at being placed in the "jack-knife" position for the second portion of the operation. The second case felt pain after the operation had been in process about one hour when the transverse meso-colon was handled.

Several other patients were given a small amount of gas in the early stages where the preliminary narcosis had either been insufficient or had had insufficient time to act. After about five minutes, gas was discontinued and the patient would stay in normal sleep throughout the operation, or if they did awaken, would be calm.

The question of patients fear of a spinal anesthesia has been broached numerous times. If they have confidence enough to permit their surgeon to operate on them, then they also have confidence enough to permit him to choose what he believes will be the most suitable anesthetic. In every case where a patient has had ether at a previous operation and then rachianesthesia they have expressed the opinion that they prefer the latter. This information is very often volunteered. One patient in this group received three spinal anesthesias and two others received two while still in the hospital, and in none of these was there any request for a change.

SUMMARY

Spinal anesthesia with tetracaine is highly satisfactory and is of sufficient duration for practically all procedures. Adequate pre-operative preparation of the patient is a necessity and adds greatly to the safety and comfort of the individual. In this group of patients, no marked changes in blood pressure were noted and post-operative complications and morbidity were minimal. Anesthesia is of two to three hours duration.

CONCLUSIONS

In tetracaine we have a valuable addition to the available drugs for anesthesia.

6024 W. North Avenue.

1. The tetracaine used in this work was Pontocaine as supplied by Winthrop Chemical Company.

HEPATOMEGALY AND ASCITES IN UNDULANT FEVER

EARL A. ZAUS, M.D.

Attending Physician Cook County Hospital, Associate in Medicine Northwestern University Medical School

AND

HUGH S. ESPEY, M.D.

Resident in Medicine Cook County Hospital

The variety of local and general manifestations of undulant fever are well known to the profession because of their excellent description in the reports of Hardy,[1] Bierring,[2] and Simpson.[3] It is, however, of interest that in a total of 365 cases analyzed by these clinicians only sixteen had palpable hepatomegaly, and no case was complicated by the existence of ascites or other clinical findings indicative of liver damage. In contrast, brucellosis seen in the Mediterranean and other areas of Europe has been described by Rimbaud and Serre[4] as "a visceral malady, in which hepatomegaly is one of the most common manifestations of this tendency." In addition, Puig[5] has shown that liver enlargement is often associated with either a purpuric clinical picture, or with that of portal hypertension, i.e. ascites. The purpuric[5] form results probably from generalized vascular damage, as pointed out by Eyre,[6] and is characterized by hemorrhages into such areas as the intestines, spleen, kidneys, lungs, skin, lymph nodes, and subperitoneal connective tissue. The ascitic[5] form is less common and is usually more serious. A history of alcoholism was present in some of these patients, but the absence of post-mortem studies leave the question of the relationship of a pre-existent cirrhosis to the acute clinical picture unanswered. This question has been examined by V. Albertini and Lieberherr,[7] and we shall have opportunity to refer to it later.

REPORT OF A CASE

M.P., white male, age 25, hog butcher at the stock yards, entered the Cook County Hospital on 12-31-40, and gave a history of having become ill on 11-8-40 with a cough, fever and sweating. His family physician made a diagnosis of pneumonia, and treatment consisted of about twenty "white pills," presumably a sulfonamide. In the course of a few days, the patient was apparently improved. However, in a short time, fever and sweating returned, and the patient became progressively weaker, short of breath upon exertion, and a skin pallor was noted. At about the same time, the patient noted a slow generalized swelling of the abdomen, which increased as time went on. Pain was absent.

On a few occasions, he expectorated a blood tinged sputum.

About three years before the present illness, he drank whiskey heavily (¼ to 1 pint daily) for a period of six months. Physical examination revealed a thin white male, with marked pallor of the skin and mucous membranes, subicteric tinge in the sclera; T. 102.2° F., pulse 132, respirations 32, B.P. 114/80 mm Hg; no lymphadenopathy, no purpura. Heart Neg; lungs — suppression of breath sounds in both bases, and a few medium moist rales. Abdomen: Distended and tense, shifting dullness; liver ballotable four fingers below right costal margins; spleen impossible to explore on account of ascites; no edema of the lower extremities.

Table I*

Blood Date	Hb	RBC	WBC	Differential
1-2-41	55%	2.69	5100	(Red cells characteristic of (a normocytic anemia 78% (poly, 20% lymph, 2% (mono.
1-10	—	3.42	4250	
1-14	56%	3.18	2400	45% " , 40% " , 5% mono.
1-24	—	3.40	2700	
1-27	—	3.54	3650	
1-31	75%	4.13	4350	
2-4	80%	4.16	5450	
2-7	85%	4.36	5900	47% " , 44% " , 7% mono.
2-13	85%	4.58	6400	

*Blood transfusions of 500 cc. — 1-21, and 1-24.

Laboratory Findings. Table I shows the course of the blood picture.

Blood chemistry showed normal content of non-protein nitrogen, glucose, phosphorus, phosphatase, and cholesterol. Total protein measured 8.71%. The icteric index was fifteen. Blood agglutinations were positive to Brucella Abortus in 1/320 dilution and to Brucella Suis in 1/2560. The blood yielded Brucella Suis upon culture.

X-ray of the chest and the electrocardiogram were essentially negative.

Peritoneoscopy (Dr. Frank de Trana) showed the liver to be enlarged and down about three centimeters below right costal margin. Its surface was smooth and there was no external evidence of cirrhosis. The spleen was markedly enlarged. The peritoneum appeared normal. The examiner thought that the possibility of portal vein thrombosis should be considered.

Five thousand cc. of a clear yellow fluid was removed and was found to have a specific gravity of 1.010. A biopsy study of the peritoneal fluid showed it contained many lymphocytes, and a few mesothelial cells. No bacteria were found. A specimen sent for culture was lost.

The hippuric acid and galactose tolerance tests for liver function were essentially normal. Table II shows the blood galactose values following the administration of forty grams of galactose orally.

A sternal smear made during the third week of hospitalization was found to be essentially normal.

Table II

	Mg % of Blood Galactose		
Fasting	30	60	90 minutes
0	44.5	16.2	0

Course: The patient's general condition improved in response to two blood transfusions. However, lysis of fever did not occur until after the start of the sulfanilamide (Table III). The dose was 90 grains daily for three days, and then 60 grains daily until it was discontinued eight days later. Because of the severe secondary anemia, and the possibility that it was due to the earlier administration of a sulfonamide, we had felt it unsafe to use the drug until there was an improvement in the count. Table I shows that it was unaffected by the second course of the drug.

Hepatomegaly and ascites: Following the removal of fluid on 1-6-41, there was no re-accumulation of fluid. The liver, however, remained about the same size until chemotherapy was started, and then it gradually diminished in size so that about three weeks later it was one finger below the costal margin. Three months later, it was normal in size.

Anemia: The blood picture was typical of a normocytic anemia. Table I shows that the count rose gradually from the date of admission, but accelerated after the transfusions.

Comment: The clinical picture of this case of porcine brucellosis had as its outstanding features: Hepatomegaly, ascites, and a severe secondary anemia. A brucella suis septicemia was still present two months after the date of onset.

Hepatomegaly and Ascites: Both European and American workers (1, 2, 3, 4, 7, 8, 9, 10) have emphasized the general nature of undulant fever, pointing out that the findings in the host depend upon the reaction of the reticuloendothelial system to the infection. Usually, the stimulation is severe enough to produce granulomatous lesions simulating tuberculosis. These are found in the spleen (78%), liver (68%), kidneys, lymph nodes, bone marrow, and subcutaneous structures. Central necrosis of these lesions, although infrequent, may occur, and then the resemblance is to Typhus. A diffuse exudative inflammatory process in the liver was found in some cases. On the other hand, the absence of specific lesions has been noted, where death may have been induced by some pre-existent disease.

Von Albertini and Lieberherr,[7] in their review of the post-mortem studies in Germany, including several of their own cases, noted that evidence of previous liver damage was often present in those cases which showed the most extensive liver damage at autopsy. It was, therefor, impossible for them to conclude that undulant fever alone was capable of producing the clinical picture of cirrhosis. Our case supports this idea, — that a previously developed liver fault is probably necessary for the development of sufficient liver damage to result in the clinical picture of portal hypertension. Unfortunately, the hippuric acid and galactose tests were of no help on this point. It is interesting to note that the peritoneoscopic examination suggested the possibility of a portal vein thrombosis, but we are inclined to feel that if such were the case, recovery from the ascites would not have been as rapid.

Table III

Daily temperature peaks.

Admission day: 102.2° F.

January

1.	101.2	12.	101.8	23.	99.0
2.	101.2	13.	100.6	24.	100.6*
3.	100.8	14.	100.0	25.	99.0**
4.	102.0	15.	101.4	26.	101.4
5.	101.4	16.	103.0	27.	99.2
6.	101.6	17.	101.6	28.	98.0
7.	101.0	18.	101.6	29.	98.4
8.	102.0	19.	100.6		
9.	100.2	20.	101.6		
10.	101.0	21.	99.4*		
11.	100.6	22.	100.0		

Afebrile to discharge 2-14-41

*Transfusion
**Start of sulfanilamide.

Anemia: Moderate anemia is not unusual as a complication of undulant fever. It may be explained as being due to either the hemolytic action of the infectious agent, and in some instances, to hemorrhages into such tissues as the lymph glands, spleen, kidneys, intestines and lungs. (Sprunt and McBryde[10]). The finding of granulomatous invasion of the bone marrow, in some cases, may explain the development of anemia on an aplastic basis. Eyre[6] described these lesions in 1908. The sternal smear in our patient would not warrant a diagnosis of a bone marrow etiology. Another possible cause might be a deficiency of the liver store of the red cell maturation factor. We have considered the likelihood of a sulfonamide hemolytic action, but the absence of a destructive response on the second administration of the drug lends no support to this possible cause.

Response to therapy: The immediate improvement in our patient following the administration of sulfanilamide indicates that the result was more than a coincidence. Recently Kind and Lucas[11] pointed out that brucella suis was more susceptible to sulfapyradine than were the other brucella. However, we are fully aware of the fact that the results with sulfonamide therapy are not always so encouraging.

CONCLUSIONS

1. A case of porcine brucellosis with marked hepatomegaly and ascites has been described. The relationship of previous liver damage to the development of portal hypertension was discussed.

2. Marked secondary anemia was present and its melitococcic pathogenesis was considered.

3. Complete recovery followed sulfonamide therapy. After three months there had been no recurrence.

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THE TREATMENT OF HYPERTENSION WITH POTASSIUM SULFOCYANATE

EDWARD W. CANNADY, M.D., F.A.C.P.

AND

HOLLIS N. ALLEN, M.D.

EAST ST. LOUIS

The use of sulfocyanates in the treatment of hypertension has become more popular since Barker's[1] introduction of a practical method for determining the blood sulfocyanate level and his demonstration that the drug may be used safely and effectively in controlled cases. The use of the drug had previously fallen into disrepute because of the frequency of severe toxic symptoms and even deaths accompanying its use.

In 1939 we decided to determine if the sulfocyanates could be used safely and effectively in the treatment of hypertensive patients seen in private practice using laboratory facilities available in the average community. Previous to that time all of the reports had appeared from large clinics and teaching hospitals having unlimited laboratory facilities and where the expense to the patient was of no necessary consideration.

The group of patients to be reported included 19 unselected cases of hypertension with systolic blood pressures remaining above 200mm. and diastolic pressures above 120mm. on the usual forms of therapy such as theobromine, nitrates, sedatives, etc. All had been observed for a period varying from three months to three years before the sulfocyanates were administered. Such a control period should remove the factor of

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suggestion from the evaluation of results. A few other patients have been studied but are not included in this report because of too short a period of observation or the admitted laxity of the patient in taking the drug as prescribed.

During the early months of the investigation no attempt was made to select cases other than that they had been observed over a sufficient control period and that their systolic and diastolic pressures were not below the minimum indicated above. As a result we have included five patients with severe renal damage as shown by marked albuminuria, elevation of non-protein nitrogen and decreased phenolsulphonephthalein excretion. At the onset we purposely included these cases in an effort to study all possible toxic and therapeutic effects in every type of case. During the past year such individuals have not been given sulfocyanate because of the unsatisfactory results obtained in this type of patient. Before treatment was started all patients were thoroughly reinvestigated for evidence of cardiac and renal damage. Aside from the usual physical examination and urinalysis the investigation included an electrocardiogram, blood nonprotein nitrogen, phenolsulphonephthalein excretion, erythrocyte and leucocyte counts, hemoglobin determination, and a differential count of the leucocytes.

During the course of treatment all patients were seen at regular intervals. Their blood pressure was taken by the same examiner (E. W. C.) under similar conditions such as time of day and relation to meals. They were carefully questioned for any symptoms suggesting toxic reactions. The blood sulfocyanate was determined under the direction of one of us (H. N. A.) either in the private laboratory or in the laboratory of Christian Welfare Hospital. All of the determinations are now being made in the latter institution by the regular technicians. The frequency of observation at the onset of treatment was one to two weeks but the interval was increased as the sulfocyanate level became stabilized. Several patients who have been taking sulfocyanate for many months are now being observed at monthly intervals.

At the onset of treatment the patient was given a prescription containing six grams of potassium sulfocyanate in 240cc. of 25 percent aromatic elixir and instructed to take one teaspoonful three times daily. The druggist was always contacted since we had some difficulty during the early months of treatment in securing the proper compounding of the prescription. In order to obtain a satisfactory blood sulfocyanate level it was usually necessary to increase the dose and in many instances the amount of the potassium sulfocyanate in the above mixture was doubled. The dose of the potassium sulfocyanate was varied according to the value of blood sulfocyanate which we attempted to maintain between seven and 10 milligrams percent. In the previous reports of others it had been the consensus of opinion that this was an effective and safe level. Recently we have used the tablets of sulfocyanate in a few cases with satisfactory results but the cost is greater to the patient.

Results — Tables I and II summarize the results in the 19 patients given potassium sulfocyanate. The group included 12 males and seven females and their ages varied from 29 to 62. Table I includes 14 patients with no demonstrable renal insufficiency while Table II includes the remaining five who had severe renal damage. The two groups have been separated because the latter type of patient would not be expected to show clinical improvement under any type of therapy but were merely included in the investigation to determine the possible toxic and therapeutic results that might be observed in all classes of patients.

The result was considered excellent when the systolic pressure fell to 170mm. or below with a corresponding fall in diastolic pressure and the patient felt symptomatically improved. The result was considered good when the blood pressure decreased but not as great as indicated above and if symptomatic improvement also occurred. Results were considered poor if no fall in blood pressure occurred, if there was no symptomatic improvement, or if toxic effects forced discontinuing the treatment.

In the entire group studied the results were excellent in 10 cases, good in two and poor in seven. Five of the cases which are considered among the poor results are those having severe

TABLE 1
Patients With Normal Renal Function

Case	Age	Sex	Blood Pressure Before S C N	Blood Pressure With S C N	Average Fall in Blood Pressure With S C N Syst.	Average Fall in Blood Pressure With S C N Diast.	Average Blood S C N Mgms. Percent	Symptomatic Results
1	47	F	220/120	140/90	80	30	6.1	Improved
2	53	F	200/120	162/100	38	20	6.0	Improved
3	57	F	220/120	170/90	50	30	7.2	Improved
4	41	M	200/130	164/110	36	20	8.0	Improved
5	29	M	210/128	170/110	40	18	9.6	Improved
6	46	F	230/120	170/110	60	10	6.4	Improved
7	42	M	210/142	190/110	20	22	6.4	Improved
8	53	M	230/140	170/110	50	30	6.6	Improved
9	49	M	204/140	170/120	34	20	6.9	Improved
10	50	M	220/140	180/120	40	20	10.0	Improved
11	60	M	210/120	160/94	50	26	9.5	Improved
12	52	F	230/130	164/96	56	34	11.2	Improved
13	44	F	260/130	180/110	80	20	10	Dermatitis
14	57	M	250/140	200/110	50	30	10.7	Dermatitis

TABLE II
Patients With Renal Insufficiency

Case	Age	Sex	Blood Pressure Before S C N	Blood Pressure With S C N	Average Fall in Blood Pressure With S C N Syst.	Average Fall in Blood Pressure With S C N Diast.	Average Blood S C N Mgms. Percent	Symptomatic Results
15	52	M	230/130	230/130	0	0	7.1	Increased weakness
16	45	M	230/170	230/120	0	50	9.3	Increased fatigue
17	62	M	280/130	210/110	70	20	16.0	Increased fatigue
18	29	F	200/120	170/110	30	10	10.3	Increased fatigue
19	49	M	210/130	170/110	40	20	10.7	No change

renal damage (Table II). Although three of this group showed a significant fall in blood pressure the patients were not symptomatically improved and the course of their disease was not altered. No serious toxic effects occurred among them but the potassium sulfocyanate was discontinued as soon as it was determined that no improvement would occur. Since the early months of the investigation no patients with severe renal damage have been treated with potassium sulfocyanate. All five of the patients included in Table II have died, the cause of death being uremia in three and cerebral hemorrhage in two. Their deaths could not be attributed to the sulfocyanate since the drug had been discontinued many months before their terminal illness.

In the remaining fourteen cases (Table I) the results were considered poor in only two. In both of these (cases 13 and 14) there was a satisfactory fall in pressure but the drug had to be discontinued because of generalized skin eruption which recurred when an attempt was made to resume treatment. Later studies demonstrated that case 14 had a functionless right kidney due to an atrophic pyelonephritis but the function of the left kidney was normal. A nephrectomy was performed but sufficient time has not elapsed to determine the results. Case 13 (Chart 1) had an excellent response in blood pressure and felt symptomatically improved until the severe skin eruption forced discontinuing treatment. This patient also had frequent attacks of angina pectoris preceding treatment with potassium sulfocyanate. The frequency

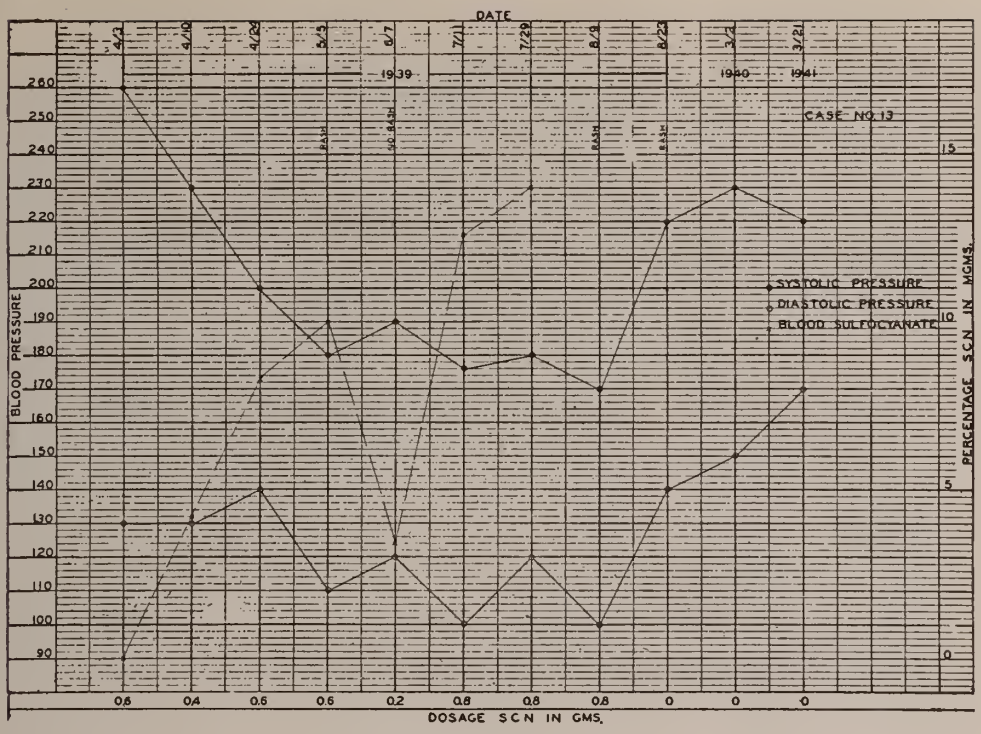


Chart 1

of the anginal attacks was not changed during the course of potassium sulfocyanate and have persisted since treatment was discontinued. Chart 1 indicates the return to the previous high level of her blood pressure after the conclusion of sulfocyanate therapy.

The average fall in blood pressure in the group of improved cases was 46mm. systolic and 22mm. diastolic. The maximum fall was 80mm. systolic and 30mm. diastolic. Chart 2 (Case 1) indicates the results observed in a patient who had failed to respond to other forms of treatment during a three year period. Her systolic pressure was 220mm. systolic and 120mm. diastolic when potassium sulfocyanate treatment was instituted in July, 1939. Her most recent blood pressure readings were 140mm. systolic and 90mm. diastolic with a blood sulfocyanate value of 6.1 mgms. percent. On one occasion her systolic pressure was as low as 110mm. and diastolic 80mm. with a blood sulfocyanate value of 13.3 mgms. percent. She felt well at that time but the dose of the sulfocyanate was decreased as it was not thought advisable to maintain such a high sulfocyanate blood level.

Chart 3 (Case 2) indicates the blood pressure results in another patient. It demonstrates the return to the previous high level when the drug was discontinued, and another satisfactory fall in pressure when therapy was resumed. On one occasion this patient's blood sulfocyanate level reached 20 mgms. percent but her only complaint was weakness. On a sulfocyanate blood level varying between six and 10 mgms. percent she feels well and states that she is less nervous, sleeps better and has fewer headaches than on previous forms of treatment.

Chart 4 (Case 3) also indicates satisfactory results in another patient with marked symptomatic improvement while maintaining a sulfocyanate blood level of five to 12 mgms. percent. This patient is interesting because of the small amount of potassium sulfocyanate necessary to maintain such a blood level. On one occasion a blood level of 24.4 mgms. percent was found with a daily dose of 0.4 grams and she complained of dryness of the mouth, tinnitus, weakness and an erythematous eruption of the arms. Potassium sulfocyanate was discontinued and

Chart 2

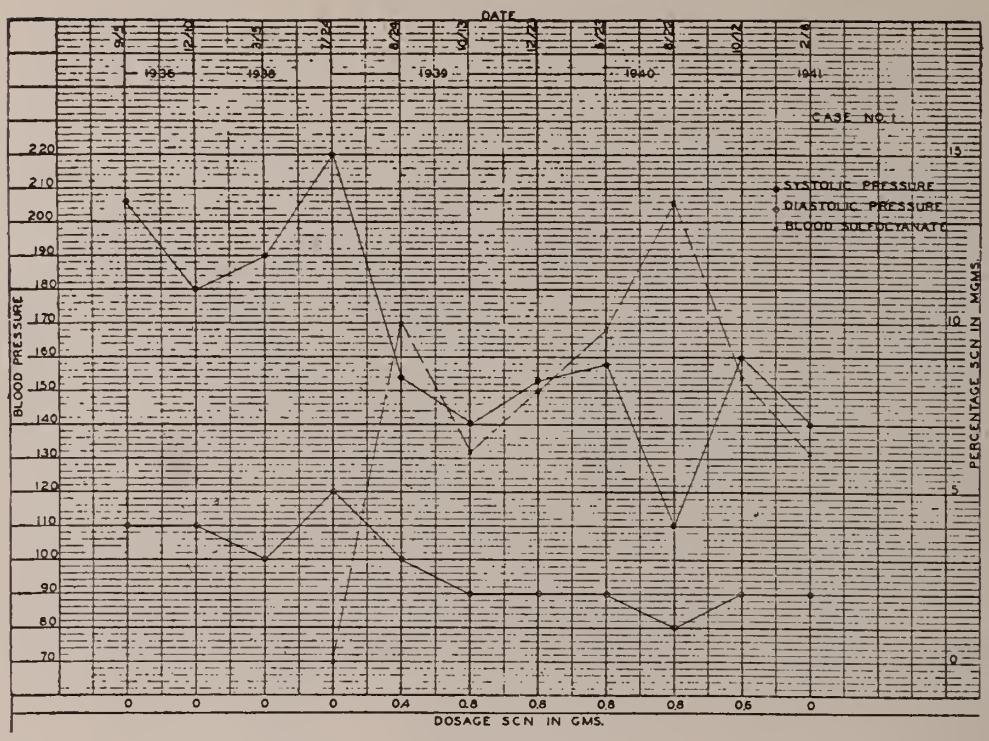


Chart 3

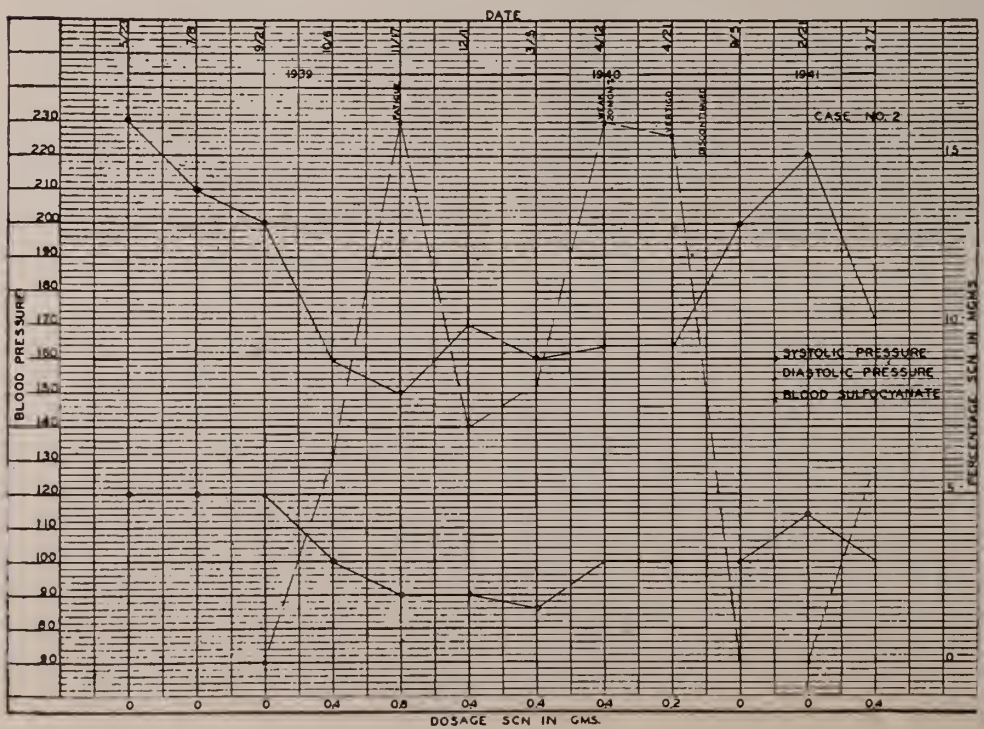
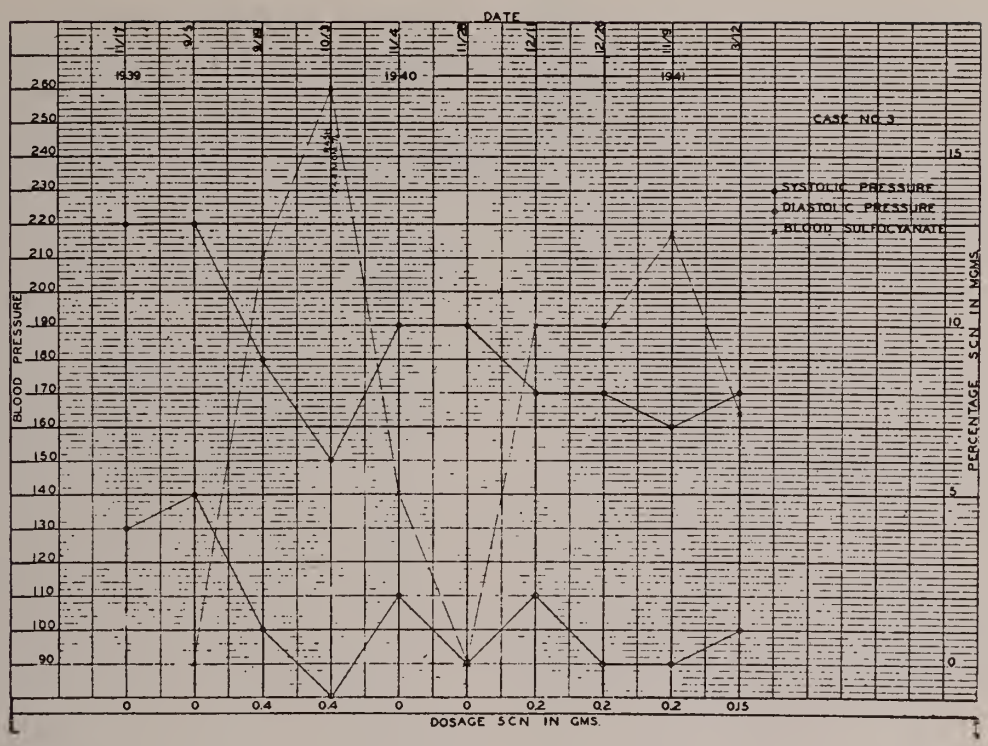


Chart 4



all symptoms disappeared. Later smaller doses were given (0.15-0.2 gm. daily) which have been well tolerated without toxic symptoms. This patient indicates the extreme caution that must be taken with individualization of dosage and frequent blood sulfocyanate determinations.

The amount of potassium sulfocyanate necessary to maintain a satisfactory blood sulfocyanate level has varied in individual patients. As indicated in Chart 4 (Case 3) only 0.15 grams daily has maintained a blood level of seven to 10 mgms. percent while 0.4 grams daily produced an alarming blood level of 24.4 mgms. percent. The maximum daily dose necessary to maintain a satisfactory blood level was 1.0 grams.

Symptomatic improvement has usually accompanied a fall in blood pressure. This has included a decrease in severity and frequency of headaches, less nervousness and irritableness, less insomnia, and less vertigo.

No serious toxic effects occurred except in the two cases with severe dermatitis and this disappeared after discontinuing potassium sulfocyanate. One patient developed a minor skin eruption which disappeared after reducing the amount of the drug and has not reappeared. A small area of furunculosis also appeared in another patient. Soon after the onset of treatment the majority complained of increased lassitude but this usually disappeared within several weeks. Fatigue and weakness accompanied extremely high blood sulfocyanate levels (20 and 24.4 mgms. percent) in two patients but were not present at satisfactory blood levels. One patient also complained of a moderate degree of aching in the calves of both legs but the severity was not great enough to discontinue treatment. One patient developed slight albuminuria and edema of the lower eye lids which disappeared after discontinuing treatment.

The results compare favorably with those reported by Barker[1], Massie, Etheridge and O'Hare[2], Griffith and Lindauter[3], Robinson and O'Hare[4], Bynum[5] and Covey[6]. We believe that

our results indicate that potassium sulfocyanate may be used safely and effectively in private practice in selected cases of hypertension providing the blood sulfocyanate level is controlled. This determination is not difficult or expensive to perform. A colorimeter is required but this is available in most hospital laboratories. As a result this form of treatment should be suitable to the physician who has accessible the facilities of the average hospital or private laboratory.

The use of sulfocyanate is not without danger and as such is not the perfect form of treatment for hypertension. However, no other drug has produced comparable results and the effect of surgical forms of treatment is still questionable. Hamburger[7] recently stated that the "cyanates have no place in the treatment of hypertension with or without blood levels" but we do not agree that this statement is justifiable. We have been unable to find a single death actually proven to be due to sulfocyanate when the treatment was properly controlled by blood sulfocyanate determinations and used in a case which might be expected to respond to such treatment. Hamburger reported the case of a seventy-one year old man whose death he thought might have been due to sulfocyanate administration. No blood sulfocyanate determinations had been made. He also cited the case of Garvin[8] who had reported the death of a seventy-one year old negro dying after the administration of sulfocyanate. Blood sulfocyanate determinations had been made in Garvin's case but the dose was increased after a blood level of 10 mgms. percent had been reached without satisfactory fall in blood pressure. We believe that the drug should be discontinued after no improvement has occurred with a satisfactory blood sulfocyanate level and should not be used in patients over sixty years of age. No other form of therapy has proved successful in elderly patients.

We agree with the observations of others that the drug should never be used unless frequent blood sulfocyanate determinations are made and that it should only be given to properly selected cases. Such a case should be an individual under sixty years of age with severe hypertension or with symptoms due to high blood pressure and without demonstrable renal or cardiac insufficiency.

SUMMARY

Potassium sulfocyanate was administered to a group of private patients having severe hypertension. Every case was observed during a control period before the drug was administered. Frequent blood sulfocyanate determinations were made. The results indicate that the drug may be used safely and effectively in office practice providing blood sulfocyanate levels are used as a control.

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DISCUSSION

DR. S. K. Robinson, Chicago: I was pleased to hear the paper by Dr. Cannady. It is a very well controlled series and he also cited the opposing views by Dr. Hamburger.

The question I want to raise is the degree to which it is advisable to reduce the blood pressure in hypertensive patients. It is an extremely important question and has never yet had an answer, but there are several indications on the horizon that in many instances at least reduction of the blood pressure in hypertensives may be a dangerous thing to undertake.

I have treated approximately 40 cases with cyanates and I agree it is a very effective therapeutic agent for the reduction of the blood pressure and many patients are symptomatically improved. On the other hand, I have had a case of temporary blindness result.

Now the question arises whether the elevation of the blood pressure in the individual is not a compensatory mechanism by which the organism tries to maintain proper oxygenation to certain tissues and whether reduction of blood pressure may not result unfavorably.

There are several reasons for this, but lack of time limits a discussion of all these, but fall in blood pressure may give rise to new symptoms and a rapid fall in blood pressure in hypertensives often precedes death. At the present time I am doing clinical work which substantiates the view that rapid variations in blood pressures, even at reduced levels, may be harmful. A wide pulse pressure may be more ominous than a high systolic blood pressure.

Now at the same time it is known that many patients are able to maintain a high systolic blood pressure, over 200 mm. for many years without enlargement of the heart. The question of adaptability arises here. There is clinical proof for the view that if the hypertension comes on gradually, the organism will adapt itself and carry on for many years. In such cases, a certain stability has resulted and the use of a vaso-dilator such as cyanate which acts only temporarily may be doing only harm because it breaks a stable system and substitutes a fluctuating one.

DR. W. O. Thompson, Chicago: I should like to ask Dr. Cannady whether he considers a reduction in blood pressure from 200 to 170 mm. of mercury as being proof that a real change has occurred.

I should also like to repeat Dr. Robinson's question. What really is the value of reducing the blood pressure in a patient with essential hypertension? Furthermore, will Dr. Cannady please tell us whether or not he himself would take potassium sulfocyanate if he had hypertension?

Dr. Edward W. Cannady, East St. Louis (Closing the discussion): I feel that the question as to the advisability of reducing blood pressure in hypertension is still an open one. It always arises when hypertension is discussed. Most observers believe that the severe hypertensive patient is in less danger if his pressure is reduced. However, the question is far from being settled, and I am not in a position to answer it.

The next question concerns the relationship of fall in blood pressure to improvement. It does not always mean improvement as we have demonstrated in our cases with renal insufficiency. We did not consider the result satisfactory unless clinical and symptomatic improvement accompanied the fall in blood pressure.

Doctor Thompson asked whether a fall from 200 to 170 is a real change. There was a more marked change in most of our cases showing good results. A fall from 200 mm. to 170 mm. systolic is not a great change but all of these patients had been studied on other forms of treatment for three to 36 months and had failed to respond.

It has been proven that there is a big personal equation in response to treatment of hypertension. It was shown not so many years ago that even the administration of hydrochloric acid was followed by a fall in blood pressure in some cases. Realizing this we did not give sulfocyanate unless the patient had received other forms of therapy during the control period.

Most of our patients did maintain some degree of hypertension. However, there was a substantial fall in the blood pressure in most of them and we believe that they are in less danger of a critical accident.

I would like to repeat that sulfocyanate is not the ideal method of treatment of hypertension, but we do believe the results obtained with it have been better than with any other form of therapy up to the present time.

Doctor Thompson asked whether or not I would want to take sulfocyanate if I had hypertension. As a member of a family of severe hypertensives I think that I would unless a better form of therapy appears, which I sincerely hope for.

DIMENFORMON BENZOATE* IN THE TREATMENT OF OVARIAN DEFICIENCY

CHARLES J. WEIGEL, M. D.
RIVER FOREST

At the present time there is available to the profession a diverse and rather complex assortment of estrogenic preparations. To the physician who finds endocrinology a new and relatively involved subject this situation is indeed a bewildering one, for it is often quite impossible for him to obtain any impartial account of the relative merits of each preparation, and many times he is guided solely by the commercial literature. It is the purpose of this report to classify the various estrogens and at the same time to present the results the author has obtained in a series of 15 cases of ovarian deficiency, using the estrogenic preparation, Dimenformon Benzoate (alpha estradiol benzoate).

Pure estrogenic substance was first isolated from ovarian extracts and follicular fluid by Doisy[1] in 1923. In 1929, Doisy and his coworkers[2] and Butenandt[3] obtained the substance in crystalline form. They termed the compound "theelin," but this name was subsequently discarded in favor of "estrone."

Shortly after the extraction of estrone, Butenandt and Marrian[4] announced the isolation of a similar substance, which differed from estrone

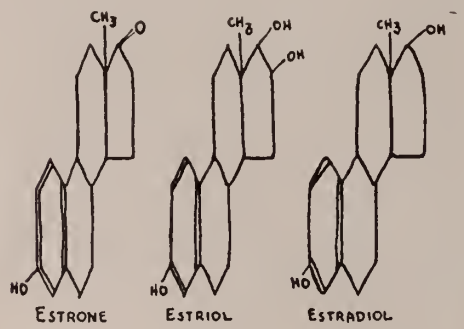
*Manufactured by Roche-Organon, Inc., Nutley, N. J.

chemically in the addition of one molecule of water. This substance was originally given the name "theelol," and later "estriol."

Subsequently, Schwenk and Hildebrandt[5] prepared another estrogenic substance, closely related to estrone and estriol. This compound was termed estradiol, and it was synthesized in the laboratory from estrone, before it was found in the natural state. In 1935 MacCorquodale, Thayer and Doisy[6] in a preliminary report announced the isolation of estradiol from sow's ovaries, and in 1936 they furnished convincing proof of the identity of this substance with synthetically-derived estradiol.

According to current concepts estradiol is believed to be the pure estrogenic hormone, although no convincing evidence for the validity of this thought insofar as humans are concerned has been offered. Estrone and estriol are considered break-down or excretory forms of the pure hormone.

The chemical relationships between estrone, estriol, and estradiol are illustrated below. They are all closely allied to the sterols (cholesterol, etc.), and possess the so-called 4-membered cyclopentano-phenanthrene nucleus characteristic of these hydrocarbons:



Estrone, estriol, and estradiol are used in various chemical forms, therapeutically, and their physiologic activities possess certain quantitative differences. Estrone is effective by injection, but is not appreciably active orally. Its action, parenterally, is rather pronounced but of comparatively short duration. Estriol, on the other hand, is effective orally, and its therapeutic action is quite marked. Estradiol is the most potent estrogenic substance of the three, but orally is not as effective as estriol.

Numerous studies of the comparative activity of these substances and their derivatives have been reported recently. Sondern and Sealey,[7] observing the effects of various orally administered estrogens on rats and mice, concluded that estriol was twice as effective (orally) as estradiol, and almost three times as active as estrone. Munro and Kosin,[8] administering estrone, estradiol, and two estradiol esters to baby chicks, observed, "This study on baby chicks, corroborates the results previously secured by other workers in mammals with respect to the relative potency of 4 estrogens. In their ascending order these are: estrone, estradiol, estradiol benzoate and estradiol dipropionate. Estradiol is only slightly more potent in chicks than is estrone, whereas in mammals the former is much more active."

In his recent textbook, Hamblen[9] discusses the relative activity of various estrogens administered in different ways. He states, "Estrogens are active by the following routes of administration; subcutaneous, intravenous, oral, vaginal and nasal and by inunction. Effectiveness of these principles, when given subcutaneously is enhanced by the employment of multiple frequent doses and the use of oil as a solvent for the purpose of slowing up absorption. The more prolonged activity of certain esters, such as estrone benzoate and estradiol benzoate, is related probably to delayed absorption. . . . The relative inefficiency of estrogens by mouth is probably due to poor absorption from the intestinal mucosa, since there is no evidence they are destroyed by digestive enzymes."

Greene[10] discussing endocrine therapy for gynecologic disorders concludes that estradiol benzoate is the most suitable estrogen for all around usage. He states that it has the following advantages over estrone or estrone-like preparations: (1) It is more potent; (2) it is more efficient; (3) it actually costs less if judged on an activity basis.

Sevringhaus[11] in a rather comprehensive report discussing the merits of various estrogens points out that direct therapeutic comparisons are quite difficult because of the diverse nature of the preparations in use and the difficulty in comparing the units employed by different manufacturers. He remarks, "Some preparations are

marketed in terms of international units, others of rat units, others of 'active biologic units' and 'day oral units' and others of milligrams. The weight basis is obviously the best, but it cannot be applied to mixtures of more than one estrogen. This interferes at once with the evaluation of the oldest standardized preparation on the market, which contains several estrogenic substances but chiefly estrone. Furthermore, the weight basis is misleading when applied to estradiol, for in animal assays this is known to be far more active than estrone or estriol. But the comparisons of biologic activity vary significantly, depending on the test which is employed. There is no accepted ratio for comparison of the efficacy of these pure estrogenic molecules in relieving the symptoms of women."

Inasmuch as there is some confusion concerning the actual values of different units in use, the following facts should be kept in mind:

1. An international unit is the specific estrus-producing activity contained in 0.1 gamma (one ten-thousandth of a milligram) of the international standard estrone.

2. A rat unit is the estrus-producing activity, as measured by vaginal smears (Allen-Doisy method), of the smallest quantity of estrogenic substance which produces estrus in 75% of sensitized spayed adult rats when administered in 3 divided doses at 4-hour intervals.

3. An international benzoate unit is the specific estrus-producing activity contained in 0.1 gamma (one ten-thousandth of a milligram) of the international standard estradiol benzoate. This unit applies to benzoylated estrogens and although the international unit and international benzoate unit refer to the identical weights of estrogenic substances, they do not imply the same degree of estrogenic activity.

It is obviously impossible to compare substances which are prepared on a pure weight basis with those which are prepared according to standards of biological activity. Doisy[12] advocates that estrogens be defined in terms of exact weights and suggests that biological units be abandoned. He states, "In my opinion it is not feasible to assay against a standard any estrogen other than the estrogen of which the standard is composed. . . . To illustrate the discrepancies of assay when another estrogen is assayed against the estrone standard, estriol has been compared with estrone, mice being used for the assay. If each substance is given in a single injection of oil, the estrone is two hundred and sixty-six times as potent as estriol. If each is given in aqueous solution in four equal portions at intervals of twelve hours, the estrone is four times as potent as estriol. Depending on the solvent and on the division of the dose, estrone may be four or two hundred and sixty-six times as potent as estriol. A similar situation exists with respect to the relation existing between estrone and a-estradiol. When each is given in aqueous solution in three portions during a nine hour period, the a-estradiol is ten time as active as estrone if rats are used for the assay but only twice as potent if mice are used."

From the foregoing it is evident that unqualified comparisons of estrogenic substances cannot be made. However, experimental evidence indicates that one rat unit of estradiol benzoate is from five to ten times as active clinically as one international unit of estrone. Clinically, estradiol benzoate possesses a more prolonged and more pronounced activity than estrone.

Geist and Salmon,[13] for example, point out these relationships as follows: "1 Gm. of estrone yields 1,000,000 R.U.; 1 Gm. of estradiol, approximately 12,000,000 R.U.; 1 Gm. of estradiol-benzoate, approximately 6,000,000 R.U. It has been estimated that 1 rat unit is equivalent to approximately 5 international units."

Before referring to the clinical results obtained in the present series of cases of ovarian dysfunction, mention should be made of another estrogenic substance which has recently been synthesized — stilbestrol. Stilbestrol and its derivatives are synthetic chemicals which do not contain the phenanthrene ring nucleus common to natural occurring estrogens.

The following cases of ovarian deficiency were treated with Dimenformon Benzoate by intramuscular administration. In each instance injection was given with a 23 gauge, 1 to 1½ inch needle, deep in the upper gluteal region. One-

half cc of air was routinely injected following the estrogen, to insure the substance staying in muscle tissue. Utilizing the preparation in this manner there was no technical difficulty in administration, and the patient experienced only a transient sensation of burning or stinging which promptly disappeared when the needle was withdrawn.

CASE REPORTS

Case 1 — Mrs. M. B., age 48. First visited my office on November 9, 1939 complaining of headaches, fatigue, depression, frequent hot flashes, and insomnia for a period of six months. Symptoms have become gradually worse. Menstrual history: 13x28x3; moderate flow; regular until six months ago when periods became scanty, stopping about three months before first visit. Patient cried frequently during history-taking and examination.

Physical examination: Essentially negative. Vaginal examination reveals a multiparous vagina, normal cervix, and normal anteverted uterus. Vaginal secretion thick and yellow, with foul odor.

Diagnosis: Menopause, with involutional melancholia.

Treatment: Injections of 0.166 mg (1000 R.U.) Dimenformon Benzoate were given twice weekly for two months with excellent result. By the middle of January, the mental condition had completely cleared, there was no vaginal discharge, and the patient was symptom-free.

Case 2 — Mrs. J. A. An old patient suffering from menopausal disturbances since 1937 and carried along on thyro-ovarian tablets. Returned December 2, 1939 complaining of headaches, extreme nervousness, and hot flashes of more intense nature for past two months. Menstrual history: 13x28x4; para V.

Physical examination: Essentially negative. Vaginal examination reveals a multiparous vagina, small cervical tear, and moderate discharge.

Diagnosis: Menopause.

Treatment: Patient was given 0.083 mg (500 R.U.) Dimenformon Benzoate twice weekly for one month with marked improvement. Further treatment with injections of 0.166 mg (1000 R.U.) Dimenformon Benzoate every 4 to 5 weeks kept the patient symptom-free.

Case 3 — Mrs. L. B., age 32. Consulted me September 12, 1940 complaining of extreme nervousness, choking feeling in the neck, loss of weight, and pains in stomach. She had these symptoms more or less constantly since 1933 when her first child was born. She had been under treatment for enlargement of the thyroid and what she termed "hyperthyroidism" for the past 2½ years; took 2 grains of thyroid daily until six months previous. In November, 1939, a B.M.R. was —1. Menstrual history: Cycles were irregular, varying from 28 to 36 days, with occasional missed periods before marriage. After childbirth, periods became regular in character but were scanty, and the flow was brownish and lasted for three days.

Physical examination: Essentially negative. No thyroid enlargement detected. Vaginal examination was also negative.

Treatment: A phenobarbital and bromide mixture was prescribed along with vitamin B complex. She returned in 10 days, feeling somewhat improved, but still complaining of marked choking sensations. On September 30 B.M.R. was —3, blood and urine were normal, and X-ray indicated no pressure on the trachea. She was then sent to a thyroid specialist and was reported as having no thyroid enlargement nor any evidence of hyperthyroidism.

On September 12, 1940 it was decided that estrogenic therapy be instituted on basis of diagnosis of preclimacteric hypo-ovarian function.

An injection of 0.083 mg (500 R.U.) Dimenformon Benzoate was given on September 12 and 0.166 mg (1000 R.U.) on September 22. On September 25 patient stated she felt markedly improved and that the choking sensations were absent. She received, at 3 day intervals, 0.166 mg (1000 R.U.) until November 9 when injections were reduced to 7-day intervals.

The patient states that for the first time in seven years she is able to sleep through the night and do her own housework without fatiguing. The only time that symptoms return is during the menses, and then they are relatively mild.

Case 4 — Mrs. L. B., age 45. A regular patient since 1928; came to me on May 1, 1939 complaining of severe menstrual bleeding for past two months. She also complained of fatigue, and difficulty in sleeping.

Physical examination: Essentially negative. Vaginal examination revealed profuse bleeding from the uterus. No tumor masses were present. The uterus was anteverted.

Diagnosis: Possible endometrial hyperplasia.

Treatment: Fluid extracts of ergot and hyoscyamus were given and the patient put to bed. Bleeding stopped in several days and on May 22, 1939, a diagnostic dilatation and curretage was done. Laboratory reports on tissue showed no evidence of malignancy — but a hyperplasia of endometrium. Blood count at that time showed a moderate secondary anemia. Liver extract was given by intramuscular injection three times weekly, and by August 12, 1939 the hemoglobin was 90%.

On December 26, 1939 patient returned complaining of bleeding again. It was decided to institute deep

X-ray therapy. Bleeding subsided after a week and treatments were continued until January 13, 1940. At the end of January she began to complain of hot flashes, weakness when in crowds, and extreme nervousness. Small doses of estrogenic hormones were given with moderate effect until March 9, 1940. On March 16, 1940, 0.083 mg (500 R.U.) Dimenformon Benzoate was given, and 0.166 mg (1000 R.U.) repeated March 19, 1940. The symptoms were markedly reduced, and 0.166 mg was administered weekly for 4 weeks with complete subsidence of symptoms. Then injections were given at intervals of 2 weeks and finally therapy was reduced to 0.083 mg every six to eight weeks. On December 14, 1940, patient states that she has had no return of bleeding or symptoms.

Case 5 — Mrs. M. G., age 49. First visited my office on September 10, 1939 complaining of persistent vaginal bleeding of six months duration.

Physical examination: Essentially negative. Vaginal examination revealed a multiparous vagina, no cervical tears, but blood flowing from cervical canal. Uterus was firm and slightly enlarged but not nodular.

Diagnosis: Probable endometrial hyperplasia.

Treatment: Patient was sent to roentgenologist for deep X-ray therapy. On November 13, 1939, she returned complaining of dizziness, headaches, and hot flashes. The latter were more or less continuous during the day and night, and were followed by profuse sweating. The vaginal bleeding had completely stopped.

The patient was given 0.166 mg (1000 R.U.) Dimenformon Benzoate three times a week for 2 weeks with marked diminution of symptoms. Treatment was continued until May 18, 1940, and by then the symptoms had completely subsided. Patient now returns every six to eight weeks for an injection. There has been no return of symptomatology.

Case 6 — Mrs. J. B., age 46. Came to me on September 30, 1938 complaining of scanty periods for past six months. No other complaints were made.

Physical examination: Essentially negative except for some tenderness on deep palpation in right lower quadrant. Vaginal examination revealed multiparous vagina, normal cervix, and an infantile and anteverted uterus.

Diagnosis: Probable early menopause.

Treatment: Patient was placed on Menformon Tablets three times a day. The subsequent periods in October, November, and December 1938 were normal. On January 7, 1939, patient was operated upon for an acute pre-gangrenous appendicitis. At this time the ovaries were examined and showed evidence of atrophy. The uterus was small and anteverted. The patient made an uneventful recovery and was not seen from January 18, 1939 until February 13. She returned on this day stating that she had not menstruated in January or February and had been exposed to conception one week before entering hospital for surgery. An Aschheim-Zondek test was done and proved negative. On March 9, she returned complaining of nervousness, profuse perspiration, and mental depression. She stated that she was often awakened at night by a feeling of intense warmth and profuse sweating about head and neck.

The patient was given 0.083 mg (500 R.U.) Dimenformon Benzoate twice weekly until March 28, when the dosage was reduced to once weekly until April 20. She now returns about once every four to six weeks for an injection. She states that she feels well and offers no symptomatic complaints.

Case 7 — On September 16, 1939, I was called to see Miss M. D., age 21, who was in bed complaining of a great deal of abdominal pain, extreme nausea, and vomiting of bile-stained material. A relative informed me that she was due to menstruate the next day and that this was a regular monthly occurence since 1934. She had been told that this would subside following marriage and pregnancy.

Physical examination: Essentially negative. Vaginal examination revealed an infantile uterus.

Diagnosis: Dysmenorrhea and infantilism.

Treatment: A ¼ grain of m.s. with 1/150 gr. atropine sulfate was administered and repeated in 6 hours to relieve the symptomatology.

On September 23, 1939, estrogenic therapy was instituted, and 1000 I.U. injections were given every four days until October 9. The menstrual flow started on October 13 with moderate pain but persistent nausea and vomiting that necessitated m.s. gr. ¼ and atropine 1/150 once. The same process was then repeated with 2000 I.U. estrogenic substance from October 17 to November 7. On November 10, menstruation started, and pain was present for 1 hour, but nausea and vomiting lasted for 12 hours. The next month, 3000 I.U. injections of estrogenic substance were used and menses began on December 12. No appreciable improvement in symptoms was noted.

This procedure was continued until May, 1940 when a dosage of 10,000 I.U. estrogenic substance was reached. The patient's weight had increased 8 lbs. and she seemed in better condition, but the nausea and vomiting at the time of menstruation persisted for 12 to 18 hours during first 24 hours of the period.

On May 24, 1940, 0.166 mg (1000 R.U.) Dimenformon Benzoate was given and repeated once a week. During the next period, in June, there was no pain, and nausea lasted for only about 6 hours.

Injections of 0.166 mg were continued weekly until October, 1940. The patient at no time was confined to bed during the first 24 hours of the period. No dysmenorrhea was noted and only slight nausea. The flow has been moderate, usually lasting 3 days. Weight increase has been progressive. The patient has obtained secretarial work and has on no occasion been absent from work because of menstrual disturbances.

Case 8 — Miss E. L., age 55. Came to me January 15, 1938 complaining of pain in the precordial region, extreme nervousness, insomnia, and hot flashes, more or less constantly for a period of 2 years. Menses were regular until 2 years previous.

Physical examination: Essentially negative. Vaginal examination, negative. X-ray of chest revealed nothing of significance.

Diagnosis: Menopause.

Treatment: Liver extract and iron were given orally. Ovarian extract gr. xxxi three times a week were administered hypodermically and symptoms were partially relieved but there were still complaints of insomnia and flashes after six weeks.

Estrogenic substance was used with a further diminution of symptoms but never to the extent where the patient was completely free for even a day. A record kept by the patient showed an average of 5-6 hot flashes a day, most of them being moderately severe. When dosage of 10,000 I.U. per injection was reached, the patient felt a great deal better, but she still complained of flashes. On March 9, 1940, 0.166 mg (1000 R.U.) Dimenformon Benzoate was given without the patient knowing the medication had been changed. She reported five days later that the number of flashes was markedly reduced, to about half. Since then, she has received one injection of 0.166 mg weekly until the present time. The number of flashes average 4 to 5 weekly — as many as 72 hours elapsing without the patient feeling any disturbances — and those she does have are exceptionally mild.

This patient has probably received more estrogenic substance than is needed in the average case. Although she previously received many forms of estrogenic substance, both natural and synthetic, I believe that the estradiol benzoate has been more efficient in making this patient's life more pleasant.

Case 9 — Mrs. A. L., age 46. First came to my office on January 29, 1940, complaining of frequent sensations of fullness and warmth in the head that gradually became more intense since a hysterectomy in 1933. At times, she had spells of dizziness, and during the previous six months, she had been having attacks of weeping, for no apparent cause. She is happily married.

Physical examination: Essentially negative. Vaginal examination revealed a small uterus and small atrophic cervix.

Diagnosis: Menopause and mild involutional melancholia.

Treatment: This patient was given graduated doses of natural estrogenic substance from 3000 to 10,000 I.U. at 3 to 5 day intervals until March 4, 1940 with slight effect on her symptoms. Starting March 9, 0.166 mg (1000 R.U.) Dimenformon Benzoate was given at 5 day intervals, and there was complete subsidence of all symptoms by April 20. The interval was lengthened to 10 to 14 days by June 1. At present the patient comes in at 6 week intervals for an injection and is in good health with only an occasional flash but no return of mental depression.

Case 10 — On July 15, 1940, Miss A. M., age 34, visited my office complaining of pain in the right lower quadrant on defecation. The pain had gradually become worse over a period of 3 months. At times there was obstipation.

Physical examination: Abdominal palpation, revealed a mass in right lower quadrant, approximately 18 cm in diameter. Vaginal examination confirmed findings of a tumor mass but no difference could be made between ovarian cyst and uterine fibroid.

Diagnosis: Pelvic tumor mass.

Treatment: The patient was operated upon 3 days later and a uterine fibroid was found lying in right pelvic area. The uterus was studded with smaller fibroids. The left ovary was cystic and about 5 cm in diameter. The cyst was filled with chocolate-colored material. A supracervical hysterectomy and left oophorectomy was performed. The patient made an uneventful recovery and left the hospital in 14 days.

On October 25 the patient complained of faintness and profuse perspiration when in crowds. There were apparently no flashes. 0.083 mg (500 R.U.) Dimenformon Benzoate was given, and 0.166 mg (1000 R.U.) on October 29 and 31, with marked improvement by November 7. At that time the cervix was examined and found normal. Injections of 0.166 mg were given on November 15, 22, and 30, December 7 and 17. There was no recurrence of symptomatology.

Case 11 — Mrs. E. B., age 30. Came to my office on July 18, 1940 complaining of severe pain associated with menstruation, which lasted for 3 days of a seven day period. Cycle was 30-35 days. Menstruation was only scanty, but was accompanied by passage of large clots. This condition had existed for approximately six months, and was similar to symptomatology 3 years previous.

Physical examination: Essentially negative except for tenderness on deep palpation in both lower quadrants. Vaginal examination indicated that both ovaries were slightly larger than normal, and were tender to palpation. The uterus was anteverted and of normal size. The cervix was normal.

Diagnosis: Functional dysmenorrhea.

Treatment: It was decided to give estrogenic substance every 4 days during the middle of the menstrual cycle. Accordingly the patient received .033 mg (200 R.U.) Dimenformon Benzoate on July 18, .083 (500 R.U.) Dimenformon Benzoate on July 22, and .083

mg again on the 26th. The period in August was associated with much pain, and bleeding was quite profuse. In August, injections of .166 mg (1000 R.U.) Dimenformon Benzoate was given on the 20th, 26th, and 30th. In September, menses lasted four days, and there was pain only for a few hours during the first day. Clots were few in number. Another three injections of Dimenformon Benzoate were given in October, with occurrence, subsequently, of another comparatively symptom-less period.

Case 12 — Mrs. H. R., age 26. Came to my office on October 10, 1940 complaining of pain in the right lower quadrant and vaginal bleeding of one month's duration. Pain at the time of the last period was quite severe. Had childbirth February 25, 1939. Menstrual cycles were 28 days and regular.

Physical examination: Essentially negative. Vaginal examination revealed a retroverted uterus, and firm cervix with a clean, small healed scar. There was a brownish uterine discharge, tinged with blood. The right ovary was normal in size, but tender.

Diagnosis: Dysmenorrhea.

Treatment: Injections of 0.083 mg (500 R.U.) Dimenformon Benzoate were given on October 15, 22, 28, and 31.

Menses started November 2 and there was no dysmenorrhea. The flow was moderate, lasting 5 days. 0.083 mg Dimenformon Benzoate was given on November 7, 14, 22 and 29. Vaginal bleeding occurred for one day on November 16. Menses started November 30, lasted 5 days, and there were mild crampy pains on the first day. Bleeding was moderate. No medication was given in December. Bleeding occurred on one day, December 14. Menses started December 27, lasting 3 days and there were relatively mild crampy pains.

Case 13 — Mrs. L. R., age 25, was seen at home on November 10, 1940 complaining of extreme weakness, nervousness, frequent choking sensations in the neck, and numbness in the arms and legs. She stated that this condition had existed since childbirth, one year previous. Menses were normal, and the cycle was 28 days.

Physical examination: Patient appeared quite undernourished. The thyroid gland was slightly enlarged, symmetrical, and firm. Heart rate was rapid. Vaginal examination was essentially negative.

Diagnosis: This case gave evidence of hyperthyroidism but from previous experiences with preclimacteric ovarian dysfunction in young women, it was decided to use estrogenic therapy for a short while and observe the results.

Treatment: 0.083 mg (500 R.U.) Dimenformon Benzoate was administered on November 12, 1940, 0.166 mg (1000 R.U.) on November 15, and repeated on November 18. On this latter date, the patient stated she did not feel as nervous. The chocking sensations were lessened, and the feeling of numbness in the extremities (which she stated was really a feeling of coldness) was entirely gone. 0.166 mg injections were given twice weekly until December 17, when patient stated she felt much better. She was able to do her work without feeling exhausted, and was much less nervous. Injections of 0.166 mg were subsequently given on December 24 and December 31. By the latter date, there had been a gain of eight pounds, and a marked improvement both mentally and physically in the patient.

Case 14 — On March 18, 1940, Miss R. S., age 20, consulted me about her menstrual cycles and gave the following history: At the age of 16 she started to menstruate and did so on four monthly occasions. The flow was moderate and lasted 5 days. Then the periods completely stopped and in February, 1937, she sought treatment. Injections were given and she then menstruated at intervals of 35 to 73 days according to a record she kept. She stopped treatment in the spring of 1939 until she consulted me.

Physical examination: Essentially negative except for moderate obesity. Vaginal examination revelaed a red and tender mucosa, and foul smelling discharge. The uterus was infantile and anteverted. Laboratory examination of vaginal secretion indicated a trichomonas infection.

Diagnosis: Secondary amenorrhea; trichomonas vaginalis.

Treatment: Thyroid tablets, gr. I., were given once daily and silver picrate powder was applied for the trichomonas infection.

On April 9, the vaginal condition was markedly improved. Injections of 0.083 mg (500 R.U.) Dimenformon Benzoate were started and given every 4th day. The thyroid extract and silver picrate powder were continued. Her general condition improved steadily and by August there was a weight loss of 13 lbs. The vaginal condition cleared completely. Cervix was clean and uterus approximately normal in size. No menstruation occurred during this time.

On August 19, 1940, 0.333 mg (2000 R.U.) Dimenformon Benzoate was given, repeated on August 13 and 15. 0.166 mg (1000 R.U.) was given August 20. One unit of Progestin was given August 20 and 24. The patient started to menstruate August 27.

The same procedure was followed in September and normal menses followed on October 1. In October the procedure was the same except that only 0.166 mg was used instead of 0.333 mg. In November, a rest period was given but no menses followed. On December 9, 0.166 mg was given and 1 unit of Progestin on December 16. Normal menses followed on December 20, 1940.

I believe that the procedure used in December, 1940 will be sufficient to keep this patient menstruating if repeated monthly for a time. By giving Dimenformon Benzoate during the estrogenic phase of the cycle and Progestin during the progestational, it is hoped eventually to stimulate normal cyclic endocrine responses.

Case 15 — Mrs. G. S., in her early 30's, visited my office on September 3, 1940 complaining of fatigue, backache, nervousness, and scanty menstruation. Most of these symptoms had been present for 3 years, following her last pregnancy. The menstrual flow had been scanty, and during the last 2 periods had lasted only one day. The flow was brownish rather than bloody.

Physical examination: Essentially negative. Vaginal examination revealed a multiparous vagina, small ulcerated cervical tear, and weakened recto-vaginal wall. Sphincters were intact. X-ray of chest was negative. B.M.R. —4. Aschheim-Zondek (Friedman's modification) was negative.

Diagnosis: Possibly pre-climacteric ovarian dysfunction.

Treatment: On October 29, 0.083 mg Dimenformon Benzoate was given. On November 8, the patient stated she felt somewhat better, and 0.166 mg. was given on same day and repeated on November 11, 1940. From this latter date until December 9, I did not see patient because of illness of other members of the family, but on December 9 she stated she felt exceptionally well during the 1st week after the last injection, and that afterwards the feeling of discomfort started to return. 0.166 mg. Dimenformon Benzoate was given, and repeated on December 13 and 19, at which time the patient felt markedly improved.

DISCUSSION

In connection with the foregoing case presentations two particular points deserve emphasis. The first is the relatively frequent occurrence of menopausal-type cases in young women, with onset dating back to previous pregnancy. Apparently the incidence of cases of these types is higher than generally suspected. This may be accounted for, according to present theories, on the basis of alterations in the anterior pituitary gland during and after pregnancy. During pregnancy the gland is believed to be hyperactive, whereas after pregnancy there may be a period of marked depression of pituitary activity to the extent of almost complete lack of ovarian stimulation. Subsequently, it is conceivable that pituitary activity may increase without effectively influencing ovarian function. In any event, I believe that it is always wise to bear in mind that ovarian insufficiency may be responsible for many so-called nervous manifestations in comparatively young women.

The second point I wish to stress is the superiority of estradiol benzoate as a therapeutic agent in treating ovarian deficiency. Several of the above cases were given preliminary treatment with estrogenic preparations containing estrone, and the results were not completely satisfactory. Hot flashes, in particular, failed to respond adequately to estrone therapy. However, when estradiol benzoate was used, not only were much smaller doses required but symptoms were brought completely under control. This impression is not mine alone for I have noted it in several recent reports on menopausal therapy.

It should be pointed out that in the series of cases described above, doses of 0.166 mg (1000 R.U.) Dimenformon Benzoate twice weekly usually sufficed even in rather severe menopausal patients. It is my opinion that the comparatively massive doses utilized by some clinicians are usually unnecessary. Small doses often serve the purpose and eliminate much unnecessary expense to the patient.

SUMMARY

1. A brief discussion of the three major natural estrogens (estrone, estriol, estradiol) is given. Comparison is made of the relative potencies of these products and the different unit systems in current use.

2. A series of cases of ovarian deficiency is presented in which small doses of Dimenformon Benzoate (alpha-estradiol benzoate) provided highly satisfactory results.

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IMPERFORATE HYMEN

JOEL L. DEUTERMAN, M.D., F.A.C.S.

AND

S. L. GABBY, M.D., F.A.C.P.

ELGIN

J. C. Nott in 1843 reported two cases of vaginal atresia in infants. The hymen in each case was evident as a whitish sac between the labia and ruptured spontaneously. In 1891 Ross collected thirty-six cases from the literature. McGlinn and Harer state that the condition of hematometra is so rare that "many gynecologists of broad experience have never encountered a case." Calvin and Nichamin in 1936 reported fourteen cases from Chicago and stated there were twenty-eight in the literature from 1917 to that time. These authors state that the syndrome associated with imperforate hymen is fairly well known to the gynecologist, but rare to the pediatrician and general practitioner.

Anatomy—The hymen consists of two layers of stratified squamous epithelium between which is a thick layer of connective tissue. This connective tissue layer may be considerably thickened at times and very tough. This diaphragm may be so thick and rigid as to require surgical intervention before coitus can be carried out, or it may be very elastic. Cases have been reported where pregnancy has occurred in the presence of an intact hymen.

In the infant the hymen is redundant and extends outward between the labia. The introitus in the adult virgin varies from one to fifteen millimeters. This opening is usually closed by approximation of the edges. The shape of the opening varies. It may be circular, semilunar, crescentic, fimbriated, septate, denticulate, or cribiform. While reporting two cases Drosin stated that during intercourse hymens are usually torn in the center of the posterior segment.

Embryology—The vagina is formed by the fused distal ends of the Mullerian ducts which have united to form a solid cord. The cells in the center of this cord liquefy and form the vaginal canal. It has been generally considered in the past that the distal cells of the fused ducts did not liquefy, and thus a diaphragm was formed. The Mullerian ducts unite during the eighth week of intra-uterine life and the vagina has a lumen at the sixteenth week.

Cunningham thought that the hymen was formed from a fold at the distal end of the recently formed vagina at the junction with the urogenital sinus. He therefore concluded that the hymen was embryologically a portion of the vagina.

Hypersecretion of the uterus at birth is occasionally seen. Lazarus considered this a response on the part of the infant's uterus to some type of maternal hormone. In subsequent infantile life and until puberty, the uterus remains quiescent. Imperforate hymen is then a congenital defect or the result of an infantile inflammatory reaction. Complete atresia of the vagina may occur. Hematocolpometra cannot develop unless the uterus is sufficiently formed to perform the function of menstruation. Excessive proliferation and coalescence of the distal vaginal cavity in the vicinity of the hymen also may be the cause of the imperforate hymen rather than the failure to regress, according to Hammond.

Pathology—With the onset of menstruation the vaginal cavity is distended progressively and the condition is one of hematocolpos. With the increasing pressure of the retained material in the vagina, the uterus has to expel each addition with greater force. A resulting hypertrophy of the uterine musculature occurs accompanied by a thickening of the endometrium. A time then comes when the menstrual fluid cannot be expelled and pressure within the uterine cavity increases. With this increase there occurs, to a certain extent, a compensatory atrophy of the endometrium which lessens the progress of the distention. Eventually, however, the fluid is forced into the tubes, distending them and resulting in leakage into the peritoneal cavity. This causes a sterile peritonitis with dense adhesions in the pelvis and in some cases endometriosis. In this process the tubes become sealed and distention then continues until surgical relief is obtained or rupture occurs. Tubal rupture has been reported. A seven year old girl with an imperforate hymen and a vagina distended with pus was seen by Melodia.

Signs and Symptoms—The signs and symptoms of hematocolpometra are secondary to the

retention of menstrual flow. A frequent complaint is the absence of menses in girls from fourteen to twenty years of age.

There may be more or less severe abdominal pain occurring at monthly intervals without evidence of the menstrual flow. Along with this there is a gradual increase in the size of the abdomen and dysuria and constipation may become marked. Pelvic distress and discomfort become more severe as the products of menstruation progressively distend the vagina, uterus, and tubes. Ultimately it may enter the abdominal cavity and give evidence of peritoneal irritation. Malaise, weakness, weight loss and secondary anemia are frequently found.

Snodgrass called attention to acute urinary distention which is frequently the distress which causes the physician to be consulted. Generalized abdominal pain may be present and a fluctuating mass may be seen at the vaginal outlet. The case reported by Snodgrass revealed a mass in the vagina on rectal examination and the hymen intact, and fifteen hundred cubic centimeters of old blood was obtained on incising. A metal catheter was required to empty the bladder.

The abdomen may reveal a large irregular mass, as in the case reported by Kotz, filling the entire lower abdomen and pelvis and extending one finger above the umbilicus. The left cornu of the mass extended to the region of the left kidney. The most characteristic syndrome is that of periodic symptoms which usually accompany menstruation, the absence of menstrual bleeding, and the presence of a doughy fluctuating mass in the vagina. Anderson's patient, a fifteen year old girl, had an acute onset of distress simulating labor pains and was diagnosed as pregnant by several physicians. Musick and Wakeman report the case of a girl of sixteen who for two years had been receiving morphine hypodermically for the severe cramps and backache. The duration of the symptoms may be from one week to one year. Three cases from one family were reported by McIllroy. Nasiruddin reported the case of an eighteen year old girl in which he found a cyst-like tumor about the size of a small orange protruding outside the vulva. The urinary meatus was not visible.

A sausage-shaped or pear-shaped mass may be palpable to one side of the main mass and is indicative of tubal involvement. The mass may be called ovarian cyst, appendix, or various urinary abnormalities. Nelson reported the case of a thirteen year old girl who underwent a laparotomy because of symptoms suggesting acute appendicitis. No rectal nor vaginal examination was made. When what appeared to be a right ruptured tubal pregnancy was seen, the hymen was examined and found to be bulging



1. The appearance of the abdomen when recumbent and after catheterization.



2. The type of material obtained. A dark, viscid, tarry substance of which there were over 2500 c.c.



3. Appearance of the abdomen after evacuation of uterus and vagina.

and imperforate. About three quarts of tarry fluid escaped when the hymen was ruptured. Inspection of the external genitalia and rectal examinations will make the diagnosis early. The mass varies greatly in size, depending on the time of onset of menses in relation to the time of the complaint. The hymen will be seen to be pale bluish and tense. Monradran reported a case with the complaint of amenorrhea in which there was a history of attacks of pain in the right lower quadrant. The attacks were accompanied by some nausea and vomiting. Drosin also reported the presence of colicy pains in the lower right quadrant and backache for several days before a simulated period.

Complications—Abdominal distress accompanied by urgency and frequency of urination and desire for defecation may occur. The distended cavities may rupture into the bladder and a vesico-vaginal fistula develop. The rectum may be perforated and a rectovaginal fistula result. According to Belson rupture has occurred through the labia majora. The hymen itself may give way and rupture occur at the introitus. In rupture of any of these areas the sinus may persist or may be inadequate and the condition may recur. The retained fluids may be forced through the tubes into the peritoneal cavity with subsequent peritonitis. These cases are most serious as infection is prone to occur.

Treatment—The essential feature is the evacuation of the distended vagina, uterus and tubes. This is done by excision of the central area of the hymen. The use of the electrocautery may be valuable in the reduction of bleeding along the margins and decrease the number of sutures necessary to control bleeding. Lazarus called attention to the value of a radical excision of the hymen to prevent subsequent closure of the opening. Some surgeons advise careful closure of the raw surfaces with plain catgut to prevent stricture and recurrence. Throughout any of the procedures the usual aseptic operating room technique is followed, always cognizant of the serious complications of infection. The importance of radical excision of the hymen is indicated by the fact that it has been necessary to reopen incised hymens, sometimes more than once. Bowyer after reoperating several times used pure carbolic acid to cauterize the wound edges and they remained open. Pyosalpinx and peritonitis are not unknown following this operation. Vaginal packs and irrigations are potential causes of infection and are contra-indicated. Elliott treatments by rectum may aid in the absorption of the contained menstrual debris. They should not be given by vagina.

The thick tarry, chocolate colored fluid varies from a few hundred centimeters to several liters. The hymen may require opening before the onset of the menses in order to evacuate retained non-hemorrhagic secretions.

Belson advocates a radical hysterectomy, removing the tubes, if a tubal tumor is present, thus removing all potentially infected organs. In his opinion, the dangers of infection are a real hazzard and conservatism is unwarranted. He further advocates drainage in all cases for the same reason.

Prognosis—Once the tubes are distended there is little hope of their functioning, hence most of these patients are sterile. Kotz reported a case which had a doughy pelvic mass six months after operation. The abdomen was flat, but the pelvic organs were not distinguishable. The menstrual periods had been regular. The vagina post-operatively may be unusually deep. Endometriosis may have occurred before the tubes were sealed and all the pelvic organs may be caught in an adhesive mass.

Searle reported a case of a woman married fourteen years. Neither she nor her husband realized that intercourse had been other than normal. She consulted her physician because of difficulty in micturition of two years duration. A large tender mass arising from the pelvis and extending half-way between the umbilicus and ensiform cartilage was found. This was found to be a hematocolpos and nearly four pints of tarry fluid were evacuated. She was seen four years later when she was five months pregnant. The vagina at that time was about the size of a nulliparous woman.

CASE REPORT

The case to be reported is that of an eighteen year old girl who was first seen at the Clinic on August 4, 1939. She came in for an employment examina-

tion and had no complaints in answer to the routine questions. Her mother died of carcinoma of the breast at the age of forty-eight. Her father and only brother were living and well. As a child she had measles, chicken-pox, whooping cough and pneumonia. She had a tonsillectomy at seven years of age

On questioning regarding her menstrual history the girl stated that she had never menstruated. That about a year previously she had sought medical advice because of lack of menses, and, without examination, was given some medicine. Further questioning then revealed that for about one month she had had some pain on urination and noticed that her abdomen was becoming increasingly hard.

A catherized specimen of urine was negative for albumin and sugar. There were 3 to 5 white blood cells per high power field, but no erythrocytes were found. There were 4,060,000 erythrocytes and 8,200 leucocytes per cubic millimeter of blood. The hemoglobin was 79.4%. The blood coagulation time was five minutes.

Her physical examination was essentially negative except for the abdomen and genitalia. The breasts and hair distribution were normal for her age. The blood pressure was 115 millimeters of mercury, systolic, and 80 millimeters of mercury, diastolic. The liver and spleen were not palpable. There was a large tumor mass in the lower abdomen which extended two fingers above the umbilicus. This mass was firm, symmetrical, smooth and fluctuant, and suggested a pregnancy. There was no abdominal tenderness.

Examination of the genitalia showed an intact hymen which was bulging between the labia. A bimanual rectal examination revealed that the pelvis was practically entirely filled with the mass and that it was associated with the vagina and uterus.

The patient was advised to have a hymenectomy and was admitted to the hospital on August 5, 1939. Under nitrous oxide anesthesia examination showed a bulging oval mass protruding from between the separated labia. This mass was about the size of a six month's pregnancy, filling the pelvis and extending above the umbilicus. The hymen was punctured with a trocar and about twenty-five hundred cubic centimeters of thick, dark, tarry fluid was evacuated. The hymen was about one-fourth of an inch thick. Sufficient hymen was then excised to admit three fingers and three penrose cigarette drains were inserted. It was necesary to clamp and tie several blood vessels. The vagina was not irrigated. The drains were removed in forty-eight hours. The postoperative course was uneventful and she left the hospital on August 7, 1939.

A progressively decreasing amount of drainage continued for six weeks, when it became thin and grayish. At this time a rectal examination revealed a thickened, movable, boggy, retroverted uterus. The patient was instructed to take a soda douche once daily and to take exercises to bring the uterus forward. On October 2, 1939, she had what was apparently a normal menstrual period lasting four days. There was no discomfort during the period. An examination on October 31, 1939, revealed the uterus to be about three times normal size. The vaginal introitus would admit one finger easily. The cervix was thickened and soft, and elongated transversely. The uterus was in a satisfactory position, freely movable and anteflexed. A subsequent check-up on January 27, 1940, showed very little change in the size of the uterus. The vaginal introitus still admitted a finger and the discharge had practically ceased. Menses had continued at four week intervals, lasting four to five days with a normal amount of flow, when she was last heard from on April 17, 1940.

SUMMARY

1. A case of imperforate hymen in an eighteen year old girl is reported.
2. A brief discussion of the pathology, signs and symptoms is given.
3. The importance of wide excision of the hymen to prevent recurrence is stressed.

102 N. Spring Street.

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THE PRESENT STATUS OF PRACTICAL ENDOCRINE THERAPY

S. CHARLES FREED, M. D.

From the Department of Medicine, Michael Reese Hospital and the Department of Gynecology, Loyola Medical College
CHICAGO

Introduction: For the past few years a number of crystalline compounds and highly purified extracts have been available for therapy in enodcrine conditions. With the advent of such substances, preparations of desiccated glands excluding thyroid or simple extracts of these, have fallen into increasing disuse. There is no justification for prescribing such products whose physiologic activity is insignificant or unknown when physicians may conveniently employ highly active preparations whose properties have been thoroughly investigated in the laboratory and clinic.

In the time allotted me it is obvious that I will be unable to cover in detail the basis for the therapeutic application of these newer preparations or to attempt to explain the reasons for therapeutic failures. I will, therefore, sketch the "high spots" only in the newer endocrine therapy as it applies to routine practice.

Anterior Pituitary: In regards to preparations of the anterior lobe of the pituitary, I will make a broad statement in saying that their use is, on the whole, disappointing. In the first place, sufficiently potent preparations are not available due to the difficulty and expense in processing and deriving a preparation whose potency would be theoretically capable of producing a therapeutic response. For example, the treatment of pituitary dwarfism with growth hormone preparations is, as a rule, discouraging except in instances where special high potency noncommercial extracts are used. The pituitary gonadotropic hormone preparations on the market have, according to the available evidence, little or no effect on the human ovary. The lactogenic hormone preparations are, on the other hand, apparently of some value in stimulating the flow of milk. There are few clinical reports on this subject. Preparations of the anterior lobe containing many factors or so-called "soup" are of distinctly questionable value. One should realize that anterior lobe preparations lose much of their activity on standing in aqueous solution.

Gonadotropic Substances: The gonadotropins most commonly used in endocrine practice are not derived from the pituitary but are obtained from the urine or placenta or pregnant women and from the serum of pregnant mares. The former, or chorionic gonadotropin, has been prepared in relatively pure form. Preparations are assayed according to an international standard powder. The Council on Pharmacy and Chemistry has recognized that this substance is of definite value in the treatment of cryptorchidism where there is no anatomical barrier which might prevent the descent of the testes. In treating cryptorchidism in boys it is advisable to differentiate between a true functional retention and the reflex spasm of so-called pseudocryptorchidism. Chorionic gonadotropin has been used in large quantites in the treatment of functional uterine bleeding, but it is now recognized by authorities that such therapy is indeed of doubtful value. It has been certainly shown that this substance is incapable of stimulating either the monkey or the human ovary. Long continued administration of chorionic gonadotropin may actually damage the human ovary. The following additional conditions have been treated with chorionic gonadotropin with doubtful results: abnormal spermatogenesis, dysmenorrhea, migraine, acne, amenorrhea and other menstrual irregularities, obesity and frigidity. There is no apparent rationale for the use of chorionic gonadotropin in these conditions.

The gonadotropic substance from the serum of pregnant mares equine gonadotropin has been on the market for a number of years in a relatively potent form. The scientific reports on this substance indicate that little benefit is derived from its use. Although it has been demonstrated fairly satisfactory that ovulation in the human may be produced by administration

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of equine gonadotropin, there is no reason to believe that any but a normal woman who ovulates spontaneously will respond to equine gonadothopin. Its use in sterility is, therefore, questionable. Its use in ovarian dysfunctions is difficult to evaluate and in all probability, according to the available evidence, not practical. There is some evidence that it may stimulate spermatogenesis. Its use in the treatment of cryptorchidism is not as satisfactory as that with chorionic gonadotropin.

Estrogens: One of the high points of modern endocrine therapy has been the development of pure, potent estrogens for use in several conditions. There are several types of estrogenic preparations on the market at the present time. There are the natural estrogens which may be in crystalline form such as estrone, estriol, estradiol and its compounds and the noncrystalline estrogens which are in effect highly purified extracts of urine obtained from pregnant mares and humans. Recently synthetic compounds have been prepared which are highly potent estrogens with most of the characteristics, biological and therapeutic, of the natural estrogens.

The problem of choosing a satisfactory estrogen for therapeutic purposes is indeed confusing. Claims for superiority of one estrogen over another have been frequently made by pharmaceutical firms. Such claims are, as a rule, based on data obtained from laboratory animals. Bioassays of estrogens by different investigators vary tremendously and there may be as much as 1,000 per cent difference in a rat unit as determined by different laboratories. The assumptions concerning the comparative therapeutic effectiveness of estrogens made on the basis of laboratory data are therefore unsafe. It is becoming quite clear that the only worthwhile estrogen assay for therapeutic effectiveness is that obtained in the human as determined by the therapeutic response and made on the basis of weight of estrogens rather than biological units. When such a comparison is made of the various estrogens in a large number of women, we will then have a reliable measure of the therapeutic efficiency of these estrogens.

In the past several years synthetic estrogens have become available for clinical trials. The one which has received the widest use is diethylstilbestrol or, as it is commonly known, stilbestrol. This is several times more potent than estrone in the rat. A remarkable property possessed by stilbestrol is its relatively high degree of activity when administered by mouth. Furthermore, it is inexpensive to prepare, compared to the natural estrogens. In dosages of 0.5 to 1 mg. a day it will relieve the menopausal symptoms of a majority of patients. The main disadvantage in using stilbestrol is the development of certain unpleasant symptoms in about 10 to 20 per cent of the cases. These symptoms consist chiefly of nausea and vomiting, headache and dizziness. There has been no adequate demonstration that these symptoms are due to tissue damage. In my opinion, the symptoms result from a systemic reaction to estrogens similar to that which occurs in early pregnancy when estrogens are likewise circulating in the tissue fluid of the woman. It is not unlikely that the systemic reactions are due to tissue edema from changes in electrolyte balance; thus nausea is explained by edema of the gut and the headache by edema of the brain. Another synthetic compound, hexestrol, is closely related to stilbestrol. It is claimed in England that it is as active as stilbestrol but less toxic. In my experience it is about one-fifth as effective therapeutically as stilbestrol and probably less toxic. Other synthetic compounds are being investigated at present. It is practically certain that physicians will soon have available highly potent, orally active estrogens which will not place an undue economic strain on the patient.

Much of the estrogen therapy has been abused and has been the subject of hit-and-miss, trial-and-error tactics. Estrogens are undoubtedly of the greatest value in the treatment of the menopause and complications of the menopause such as senile vaginitis and kruarosis. They are also of value in gonorrheal vaginitis of children. In the treatment of ovarian dysfunctions there have been large numbers of papers containing variable data on the use of estrogens. It is difficult to discuss briefly the use of estrogens in ovarian disorders since there is no uniform procedure in treating these conditions as almost every investigator has his own method. In the treatment of amenorrhea, estrogens may be administered to induce uterine bleeding. This usually requires relatively large

doses, in the neighborhood of 10 to 30 mg. of estrogenic substance. This therapy must be repeated in courses in order to produce cyclic bleeding. Most patients cease having these menstrual cycles after the estrogens are withdrawn. Whether or not it is worthwhile to induce bleeding in patients with amenorrhea depends to a great extent on the desire of the patient. For psychic reasons only, therefore, does it appear worthwhile to use estrogens in amenorrhea. A few patients with functional amenorrhea may continue to have regular cycles after cessation of therapy. This type of therapy has been called "shaking the clock." The use of synthetic estrogens may more conveniently permit such therapy, since large amounts may be administered orally at relatively little expense. In the treatment of dysmenorrhea, estrogens have been used successfully to a limited extent. These should be administered in the first two weeks of the cycle in order to completely or partially suppress ovulation. Such treatment is usually temporary and repeated courses of therapy may be necessary. Dysmenorrhea, due to the so-called infantile uterus, is a doubtful entity since it has been shown rather satisfactorily that functional dysmenorrhea occurs as a rule where there has been an ovulation and this indicates a normal reproductive apparatus. In the treatment of meno-metrorrhagia, the estrogens are being used with some success of late. This has been due to the fact that some of the newer estrogens can be obtained in high potency dosage forms, and doses required for the suppression of bleeding are rather large in comparison with the amounts usually administered in the treatment of the menopause. Occasionally relatively small amounts may be effective, such cases being those of excessive bleeding in women approaching the menopause. A rather interesting development in the treatment of uterine bleeding is the injection of estrogens in oil directly into the cervix with practically immediate control of the bleeding. Stilbestrol and estradiol compounds have been used for this purpose. Estrogens have also been used in the suppression of lactation with good results. The best results have been obtained in the early postpartum period where the administration of 10 to 20 mg. of estrogen daily for two to three days will suppress or delay lactation and prevent mammary engorgement. The use of estrogens in weaning may be of some value in relieving the patient of her distress due to mammary engorgement.

Estrogens have been used for a large number of unrelated conditions. The list of such conditions are encyclopedic in scope and I will be unable to discuss the unscientific nature of much of this therapy. There are a number of conditions, however, which are the subjects of experimental investigation at the present time but I will refrain from discussing this work.

I would like to mention the use of implants of crystals or pellets of estrogens. By placing 25 to 50 mg. of estrogen in crystals or pellet form in subcutaneous pocket, menopausal symptoms may be relieved for many months without supplementary therapy because of the retarded rate of absorption of the bulky material. A modification of this technic is possible with the new preparation of estrone crystals which my associates and I have introduced. This preparation is injected with a syringe; the water is taken up rapidly by the tissues leaving a deposit of crystals to be absorbed slowly giving a prolonged therapeutic response. Injections of diethylstilbesterol defalmitale will also control symptoms for many weeks as I and my associates have recently reported.

Progesterone: Progesterone, the corpus luteum hormone, is obtained from ovaries or by chemical synthesis of certain steroids. The therapeutic use of progesterone has been, on the whole, a disappointment. At first it was considered that progesterone would be ideal in the treatment of functional uterine bleeding, dysmenorrhea and habitual abortion. The evaluation of the evidence in the literature indicates that it is of little value in the treatment of ovarian dysfunctions. It is helpful in relieving premenstrual tension and it is of possible value in the treatment of habitual abortion. In the latter case it is indeed difficult to evaluate the efficacy of any agent and for this reason numerous preparations have been considered worthwhile. There appears to be evidence, however, that in many cases of habitual abortion the patient has a progesterone deficiency, and on this basis progesterone may be indicated in

such cases. A compound called pregneninolone, which has progestational activity when administered by mouth, has been available commercially for over a year. This "oral progestin" is one-fifth as active by mouth as progesterone by injection. Inasmuch as progesterone is of such limited value, it can be seen that the use of pregneninolone is open to question. There have been a few reports on the beneficial use of pregneninolone in the treatment of habitual abortion, but such results require confirmation. In the treatment of ovarian dysfunctions, pregneninolone is of doubtful value.

Testosterone: The most efficient androgen for therapeutic purposes is testosterone propionate. Preparations of testicular tissue or androsterone are practically worthless. Testosterone is of distinct value in the substitution therapy of eunuchoid or castrate men. The dosages required for satisfactory effects are from 60 to 150 mg. per week. The symptoms and signs of castration return with cessation of therapy. The androgen treatment of functional cryptorchidism has few advantages, nor has it any but psychic value in treating senility, psychic impotence or impotence due to other than organic causes. It should not be used for treating disorders of sperm formation since it actually suppresses spermatogenesis.

Testosterone propionate may induce symptomatic relief in cases of prostatism but has no effect on the anatomic structure of the prostate. This substance has been used in certain ovarian dysfunctions such as dysmenorrhea, menorrhagia, painful breasts and premenstrual tension. It may be of value in some of these conditions, at least temporarily, but usually the amounts required are rather large, 100 to 500 mg. per month. An oral preparation of testosterone is available in the form of methyl testosterone. Four times as much of this compound by mouth is required in order to induce the effects obtained with testoster one propionate by injection. The economic aspects of such therapy should therefore be examined closely. These androgens exert their effects by percutaneous administration. The ointments of testosterone propionate and methyl testosterone now on the market are definitely of insufficient strength to induce any satisfactory clinical response other than that from suggestion.

Adrenal Cortex: Effective preparations of the adrenal cortex are obtained only from a relatively large amount of glandular material, that is, about 1 c.c. of extract should be equivalent to about 51 grams of gland. Adrenal cortex extracts are of value in the treatment of Addison's disease. It is quite doubtful as to whether these extracts are worthwhile in treating so-called borderline cases of adrenal insufficiency such as asthenia and toxemias. Preparations of the adrenal cortex for oral administration are theoretically effective, but it has been definitely shown that in order to obtain a good clinical response, relatively huge amounts of the best oral preparations are required and this is certainly not within the reach of most patients.

Desoxycorticosterone acetate, a synthetic seroid, is effective in the treatment of Addison's disease, but caution should be observed inasmuch as overdosage may result in hypertension or even heart failure. Its use in the treatment of the borderline cases of adrenal insufficiency is also open to question. The use of adrenal cortex preparations in the treatment of shock is being investigated vigorously at the present time. It is possible that in the near future we will have more information regarding the treatment of surgical or medical shock by such hormone preparations, since this therapy is in the early experimental phase and additional evidence is awaited.

CONCLUSION

When the indications are proper, one may obtain gratifying responses with endocrine preparations, but it is too much to expect that they will be of value in the multitude of indiscriminate conditions for which they have been used. The discouragement of many physicians with endocrine therapy is due mainly to the employment of endocrine products in conditions for which there is no sound basis. If physicians will adhere to scientific principles of endocrine therapy, this situation will be satisfactorily remedied.

The recent progress in the development of crystalline endocrine compounds is most promising, especially when it is realized that certain synthetic substances may actually be superior to those obtained from natural sources.

55 E. Washington St.

AMERICAN SOLDIER IS BEST FED FIGHTING MAN IN WORLD TODAY

In an outline of the Army's nutritional problems, James A. Tobey, Dr. P. H., Lieutenant Colonel, Sanitary Corps Reserve, United States Army, New York, in the current issue of War Medicine, published by the American Medical Association in cooperation with the Division of Medical Sciences of the National Research Council, declares that "For an army of 1,500,000 men, nearly 9,000,000 pounds of food must be procured, transported, stored, supplied and prepared every day, the biggest catering job in the history of this country. With the expansion of the Army, this task will gradually become even greater." He explains that in camps and posts the American soldier eats about 5 pounds of food a day, or somewhat over 1,800 pounds a year whereas in the civilian population the average consumption of food is about 1,400 pounds a year.

Pointing out that good nutrition is a military necessity, Colonel Tobey says that "the American soldier can be, and generally is, the best fed fighting man in the world today. There is available to him an abundance of wholesome natural foods, and his menus are carefully selected and arranged by dietary experts who are thoroughly familiar with the newer knowledge of nutrition. . . .

"The fare of the American soldier is, in general, much superior to that of the Nazi and the Japanese soldier. Because of the shortage in natural foods, the Nazis depend in considerable measure on *Ersatz,* or substitute, foods, such as concentrates of soy bean flour mixed with dried vegetables and fruits. These concoctions are nourishing but not particularly appetizing. The Japanese subsist largely on polished rice, with soy beans, root vegetables and a little fish. Staple foods common in America, such as bread, meat, milk and fruits, are almost totally lacking in the Japanese diet, although the military forces receive better rations than does the general populace. . . ."

Colonel Tobey explains that while the procurement of food and its supply to troops is the function of the Quartermaster Corps, supervision of the nutrition of the soldier is the legal responsibility of the Medical Department of the Army.

Explaining that the basis of the field ration, which last year replaced the old garrison ration system for troops in this country, is a monthly menu prescribed for stations within a corps area, he said that a most significant statement in the order creating the new ration is that " 'Care will be exercised to see that the menu is nutritionally balanced, ample variety provided, and full utilization made of seasonal fresh fruits and vegetables.' Apparently this is the first time in the history of the Army that stress has been placed on the nutritional adequacy of the diet, a natural development, however, in view of the modern progress of nutritional science."

Regarding nutritional standards in the Army, Colonel Tobey says that each soldier needs at least thirty-six essential nutrients in his diet.

"The soldier," he says, "can obtain all of these necessary nutrients if at least 60 per cent of his calories, or units of food energy, are furnished by such protective and body-building foods as pasteurized milk and other dairy products, eggs, fruits, green leafy vegetables, yellow vegetables, meats and enriched bread and whole grain cereal products. The remainder of his calories will be secured from energy-bearing foods, such as breadstuffs, potatoes, solid vegetables, fats and sugar. He will derive full benefit from these foods only if they are properly prepard, without loss or reduction of essential vitamins and minerals."

On February 10, 1942, it was announced that all bread used by the Army would be prepared from enriched flour.

Explaining that during combat and in certain situations, such as aviation activities, parachute work, tank maneuvers and mobile operations at long distances from bases, special rations are often necessary, the Colonel said that concentrated foods packed in special containers have been devised for these purposes.

SEARLE COMPANY ENLARGES EXECUTIVE STAFF

G. D. Searle & Co., scientific pharmaceutical manufacturers of Chicago has added Franklin P. O'Brien to its executive staff. John G. Searle, President, announces Mr. O'Brien will act as Mr. Searle's executive assistant.

The new Searle Research Laboratories, now located in Skokie, Illinois were recently opened to public and Army and Navy inspection at an all-day reception.

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY

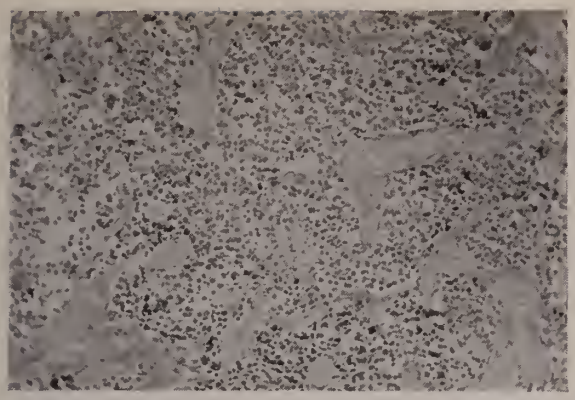
B. Markowitz, M. D.
Brokaw Hospital
BLOOMINGTON

CASE 1 — MULTIPLE PRIMARY MALIGNANCIES

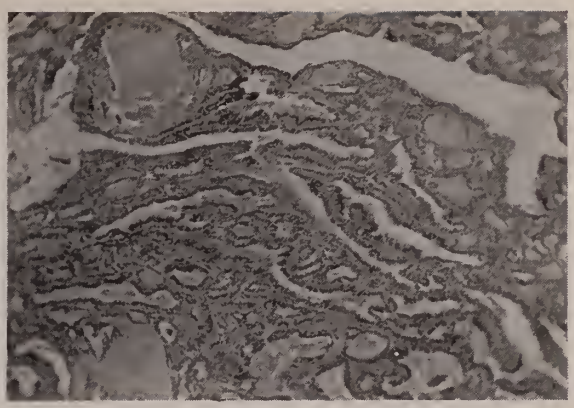
Dr. S. J. Huerta: — This 44 years old female, unmarried, was admitted to the hospital with a history of having fallen out of bed several days previously. She was stuporous and the history was obtained from a relative; she had been feebleminded since birth; had chorea as a child and developed epileptic attacks at the age of 25 which occured quite regularly until the present illness. Four years ago she complained of a painful nodule in the left breast of year duration. There was a slight discharge from the nipple and she had lost about 20 pounds in weight. She was admitted to surgery and a radical left mastectomy was performed. The anatomic diagnosis was acinar carcinoma. She made an uneventful surgical recovery and was discharged in three weeks. One year later she was re-admitted with symptoms of thyro toxicosis. At this time the left lobe of the thyroid was firm and nodular. There was a fine tremor of the tongue and coarse tremors of extended hands and fingers. The temperature, pulse and respirations were normal. X-ray of the chest was negative. No evidence of breast metastasis was demonstrable and she was subjected to a thyroidectomy. The anatomic diognosis on removed thyroid was adeno-carcinoma. Again she made an uneventful recovery and was discharged from the hospital on the 18th day. From then to her present illness there were no specific complaints except for headache and chills two days before entry at which time she was put at bed rest.

Physical examination revealed a fairly well developed, poorly nourished white female in a stupor. Chest examination revealed absence of breath sounds in the left lower chest with moist rales on the right side. The abdominal examination was negative. Her respirations were shallow and numbered 32. The temperature was 103 and the pulse 135. The red count was 3,500,000, the white count 12,000 with 80% polymorphonuclears. The urine was essentially negative. She grew steadily weaker, her breathing became very shallow and she expired four days after entry.

Dr. B. Markowitz: — On post mortem examination the essential findings were left lobar pneumonia and carcinoma of the left ovary with metastasis to the abdominal lymph glands. The left ovary, you will note, is replaced by this large rounded tumor measuring 10 cm in diameter, which on microscopic section revealed a very cellular picture. We refer to this type of tumor as embryonal cell carcinoma. The right ovary was the site of a smaller but similar tumor nodule measuring only two cm in diameter and presenting the same microscopic picture. There was no evidence of recurrence of either of the 2 malignancies found during life, and a section of the thyroid, you



Case 1. Figure 1. Embryonal cell carcinoma of ovary.



Case 1. Figure 2. Papillary Adeno-carcinoma of thyroid.

will note, is of an adeno-carcinoma type, entirely different from that seen in the ovary.

DISCUSSION

This case is of interest, first, because of three separate malignancies. Many multiple malignancies have been reported but triple cancers are relatively rare. Exclusion of the probability that one tumor is a metastasis rather than a separate malignancy is sometimes difficult. Multiple malignancies in breasts are open to criticism because of this probability; similarly, in cases where primary gastric and ovarian cancers are reported the question of metastasis arises because of the frequent spread of gastric carcinoma to ovaries. Multiple ovarian tumors too are questionable because of the difficulty in differentiating between the primary origin and the metastasis. In this case you will note the different pictures presented by the different tissues and their respective slides. That of the breast is the usual acinar carcinoma referred to as carcinoma simplex. This type comprises about 70 to 75% of all breast cancers. That of the thyroid is a papillary adeno-carcinoma while the ovary presents a very cellular picture which we reported as an embryonal cell carcinoma. There is no similarity whatever between these different tumors. Secondly, despite the history of illness since birth, epileptic attacks since the age of 25, this patient survived two carcinomas noted during life and one found at post mortem, to die of pneumonia at the age of 44.

CASE 2 — DIABETES WITH MARKED ARTERIO-SCLEROSIS

Dr. E. M. Stevenson: — This 52 year old female entered the hospital with a history of diabetes for 12 years with polyuria and glycosuria. Only during the past year had she complained of tenderness in the right great toe. During the past 6 months she complained of dyspnea, palpitation, precordial pain and edema of the ankles. She had been on a restricted diet but never used insulin. She had lost about 10 pounds in weight during the past 6 months. Several days before entry she injured the right great toe and since then has suffered excruiating pain. Physical examination revealed a well developed and fairly well nourished middle-aged female who complained severely of right foot pain. The heart was enlarged to the left and a systolic blow was heard at the apex. The second aortic sound was greatly accentuated. The abdomen was essentially negative. There was evidence of moderately severe generalized arterio-sclerosis; there was pitting edema of both legs and a dry gangrene of the right great toe. The blood pressure was 180/100; pulse 84; temperature 99.4.

Laboratory findings: — The urine showed no sugar or acetone but abumin was 4+ and contained many casts. The blood chemistry was high: urea nitrogen 80 mgms., urea 171 mgms., creatinine 5.8 mgms., sugar 410 mgms. The red cells numbered 4,000,000 per cmm. The white cells numbered 10,800 per cmm.

Diagnosis: — Diabetes with gangrene and hypertensive heart disease.

After the second day in the hospital the patient ceased complaining of pain, sank into a stupor, broke out in a profuse perspiration and expired on the 4th hospital day.

Dr. B. Markowitz: — The essential post mortem findings were those of arteriosclerosis and dry gangrene of the great right toe. The heart was considerably enlarged, weight 510 gms.

The aorta and coronary arteries showed mild and moderate calcified placques. The pancreas was smaller than normal, about 2/3 normal size, was very firm but otherwise showed no gross change. The kidneys weighed together 290 gms; the surface was irregular and granular and the cortex narrowed. There were several hemorrhagic erosions in the gastric mucosa extending into the small bowel.

Microscopic examination showed marked severe vascular changes in the kidney and pancreas. There were also marked severe parenchymal changes in the kidney. The other organs showed no remarkable microscopic findings.

DISCUSSION

While the diabetes is of 12 years duration and the gangrenous toe only of one year duration, it is reasonable to assume that the diabetes is of arteriosclerotic origin. This arteriosclerosis was generalized and she developed arteriosclerotic gangrene of the right foot, which became secondarily infected. The question arises — Why the history of glycosuria over a period of years with a terminal blood sugar of 410 mgms without glycosuria? It frequently occurs that in diabetes complicated by severe renal damage sugar disappears from the urine. The severe damage to the renal parenchyma in this case explains the absence of sugar and heavy albumin in the urine with very high figures for blood sugar, urea and creatinine.

Question: — How do you explain the gastro intestinal hemorrhagic erosins?

Dr. Markowitz: — These are most likely erosions that are so frequently found post mortem due to uremia. You will remember that the patient ceased complaining of pain, sank into a stupor and broke into a profuse sweat just before death. This together with the high blood levels and the character of the erosins would suggest uremia as the causitive factor. The severe renal damage and the high blood figures for the blood nitrogenous waste products substantiate this suggestion.

Question: — Would you give the cause of death as diabetic or renal.

Dr. Markowitz: — Quite definitely renal. She most likely died in a uremic coma.

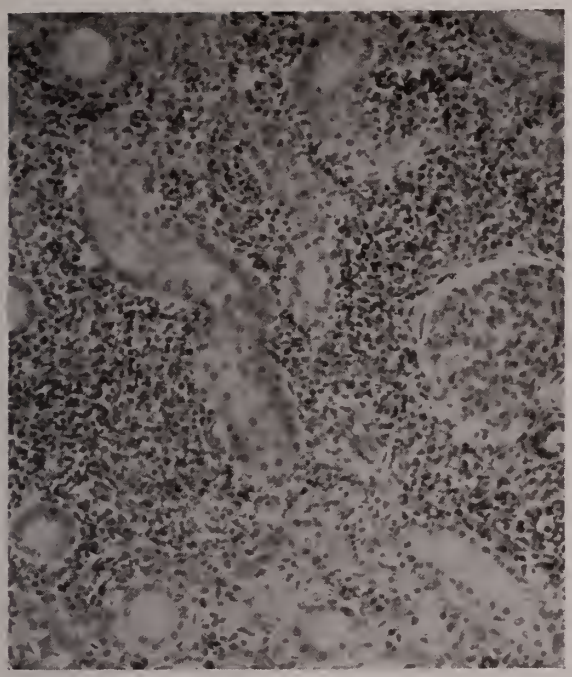
CASE 3—LYMPHATIC LEUKEMIA

Dr. Harry L. Howell: — This 70 year old male gave a complicated and bizzare history which began 6 years ago with pain in the arms and legs. There was no relief following removal of questionable teeth and subsequent tonsillectomy. From the latter he hemorrhaged severely and this dated the beginning of his present anemia. For the following four years he grew constantly weaker and had been subjected to considerable medical treatment. One year ago he visited the Mayo Clinic where the spleen was found enlarged and there was a suggestion of a large left kidney with suspected malignancy. His white count, while there, ranged from 18,000 to 30,000 and the red count from 2½ to 3 million. The differential count revealed 45 to 65% lymphocytes and a lymphatic leukemia was considered. Six months ago he developed a hematuria which persisted for several weeks and ceased. He became progressively worse and entered the hospital on a stretcher.

Physical examination presented a thin, emaciated male. The gums were pale and soft, the chest essentially negative. The spleen was markedly enlarged and slightly tender; the liver was palpable, one finger breadth below the costal margin, smooth and sharply defined. The blood pressure was 110/68, pulse 96, temperature 99.4.

Laboratory findings: — R B C — 2,400,000; W B C — 37,000; Hb 65%; differential count — Neutrophyls 30%; Lymsphocytes — 70%; no disproportion in R B C. No immature cells were noted. The urine showed a trace of albumin with an occasional red cell. Blood Kahn — negative. Blood chemistry was within normal limits. He was treated conservatively on the basis of a severe secondary anemia with a possible leukemic background. Two days before death the white cells totaled 60,000 with 88% lymphocytes a few of which were considered immature. He failed quite rapidly and expired on the 15th hospital day.

Dr. B. Markowitz: — On post mortem examination the essential findings were those of a lymphatic leukemia and severe anemia. Upon gross examination the left kidney was markedly enlarged, weight 320 gms. while the right kidney was very small, weight 60 gms. The right kidney, on section, showed a distended pelvis with more than usual fat tissue, the markings distinct, the surface pale purple-grey. The liver was large, weight 1,850 gms., the cut surface



Case 3. Figure 3. Lymphatic Leukemia — left kidney. (infiltrations compress but do not invade tubule.)

purple-grey with obscure markings. The spleen was greatly enlarged, weight 510 gms., the cut surface relatively firm and pale grey. All other organs presented a "whitish anemic" appearance. On microscopic examination the principle finding was marked leukemic infiltrations in all organs, especially the spleen, liver, kidneys and bone marrow.

DISCUSSION

An interesting phase in this case is the contracted hydro-nephrotic right kidney weighing only 60 gms with compensatory hyperplasia of left kidney weighing 320 gms which quite apparently preceded the fatal leukemia. This large kidney was apparently noted at the Mayo Clinic and associated with a progressive secondary anemia, probably suggested a kidney malignancy. The blood findings of leukemia were rather obscure and those of a progressive secondary anemia apparently over shadowed the true picture. The leukemic infiltrations found at post mortem were those of a lymphocytic type which definitely makes the diagnosis of a lymphatic leukemia. While the terms may not be well chosen we could in this case suggest a leukemic lymphatic leukemia because of the lack of the usual leukemic blood picture. A persistent high total white count with ever increasing number of lymphocytes together with the profound anemia and weakness are quite compatible with the post mortem findings of lymphatic leukemia. Most of these cases develop an acute process just prior to death at which time immature cells are usually found. I would like to call your attention to the microscopic picture of the left kidney. There are marked leukemic infiltrations which surround and even compress the tubules but do not invade them. This lack of invasion is frequently sited by those who do not believe that leukemia should be considered a malignant tumor.

Question: — Could the tonsillectomy and teeth extraction be related to the leukemia.

Dr. Markowitz: — The late Dr. Jaffe frequently called attention to leukemic changes following teeth extraction. I have seen 2 such cases both of which were of the acute type and fatal within a few months while this case went on 5 years. Yet if leukemia is an abnormal response to an outside stimulus chronicity should make no difference. If the patient just happens to have that predisposition, that is, if "the soil is proper for the seed" extraction of the teeth could lead to leukemia.

PRESCRIBING AT A COFFEE HOUSE

Dr. Radcliffe (1650-1714), the greatest practitioner of his time, was also famous as the personal physician of Queen Anne. In his relations with his royal patient he took care to maintain his professional independence. His aphorism, that there is no post more dangerous than that of personal physician to reigning princes, is apparently an expression of his experience. Dr. Radcliffe gave prescriptions to apothecaries for half a guinea (10 shillings 6 pence), i.e., for half the usual fee, in case they came to him in the evening at his coffee house. To be sure, the patients did not come along; therefore, the reduced price. When Radcliffe's favorite, Dr. Mead, succeeded his master, he likewise followed his practice of prescribing at a coffee house. He prescribed in the evening at Batson's coffee house, while in the forenoon he was to be found at Tom's coffee house in Russell Street. His fee also was a half a guinea. Mead's apothecary practice was enormous. When his personal friend and political opponent, the famous Dr. Friend, was imprisoned in the Tower for alleged political crimes, Dr. Mead took over his practice and attended to it partially from his coffee houses. When Friend was released, Mead turned over to him 11,400 guineas, that he had collected from Friend's practice.—*Ciba Symposia.*

How U. S. Army planes can photograph enemy territory at night without themselves being seen was revealed by Ernest E. Johnson of the General Electric Company in a forum address.

Photographic planes drop flares that light up the coutryside below very brilliantly for just an instant. The camera shutter in the plane is synchonized with the flash by means of a photoelectric cell. The flash is so brilliant and blinding that no one from the ground can see anything above. The plane carries home photographs that tell much more than the unaided eye could ever see.

—*Science News Letter.*

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

The American Medical Women's Association, Inc. Branch Number Two, Chicago, Illinois has recently elected the following officers for the year 1942-1943:

President — Beulah Cushman — 25 E. Washington Street, Chicago.

1st Vice-Pres. — Emilia Giryotas — 8 S. Michigan Avenue, Chicago.

2nd Vice-Pres. — Victoire D. Lespinasse — 7 W. Madison St., Chicago.

Secretary — Helen Pisarik — 2515 Scoville Ave., Berwyn.

Treasurer — Clementine Frankowski — 1735 Atchison Ave., Whiting, Ind.

Editor Bulletin — Sadie Bay Adair — 3866 Lake Park Ave., Chicago.

President-Elect — Augusta Webster — 30 N. Michigan Avenue, Chicago.

The Morgan County Medical Society is presenting a series of five radio programs in connection with a broad program of education sponsored by the Exchange Club of Jacksonville, Illinois. The following programs have been arranged for station W. L. D. S., Jacksonville:

July 19—"The Relation of Physician and Public"—Dr. A. G. Wolfe.

July 26—"Morale"—Dr. S. N. Clark.

August 2—"Keeping Well"—Dr. Friederich Engelbach.

August 9—"The Blood Bank"—Dr. Vincent T. J. Lenth.

August 14—"Industrial Medicine"—Dr. F. A. Norris.

The Educational Committee is receiving many requests for doctors to present health talks during the coming year. The Committee is granting requests only when lay organizations can promise an audience of at least fifty adults. Copies of radio dialogues and other material will be furnished smaller groups as this material may be presented by members within the organization.

QUESTIONS ASKED BY THE PUBLIC

During the past few years many doctors have given talks on Cancer before various types of lay organizations. At some meetings an opportunity is given the audience to ask questions of the speaker and the members of the medical profession will be interested in many of these questions asked during the last few months. Mrs. A. I. Edison, Chairman of the Women's Field Army for the American Society for the Control of Cancer in Illinois, kept a list of the questions, some of which are given below:

In a throat cancer, is there any early sign visible on inside of throat?

Is it true that cancer is not inherited, but can the susceptibility to cancer be inherited?

What age is cancer most prevalent? Is it true that children may have it?

Is there ever pain where there is no lump?

Is brain tumor a form of cancer and what are the symptoms of it?

How would one know if a small tumor on the ovary became cancerous, between periodic examinations?

You say "irritation over a period of time may cause cancer". How long is this "period of time?"

Is Hodgkins Disease a form of cancer, or hereditary?

Will a removed tumor ever revert to cancer?

Can common warts on hands ever become cancerous?

Is there any truth in the statement that moles should be removed?

Are the chances of cure equally as favorable in elderly persons as in young persons?

Does a blow on any part of the body cause cancer?

Does indigestion later turn to cancer?

About fifty sets of copies of the Postgraduate papers presented at the Postgraduate Clinical Conferences are available in the office of the Educational Committee, 30 North Michigan Avenue. The price of a set is $1.00. Orders by mail will be filled promptly.

Recently the American Physicians Art Association held its fifth annual exhibition at Atlantic City, in connection with the American Medical Association convention. Illinois physicians were among the winners of the highest awards. The first prize for outstanding sculpture was a gold cup presented to Adolph M. Brown of Chicago. The award for best photography was given to Max Thorek of Chicago. Joseph S. Waldman of Belleville was awarded a medal for photography and Karl Goldhamer of Quincy was presented a cup for a pastel. The jury consisted of an outstanding group of nationally known artists.

Dr. J. L. McCormack of Bone Gap and Dr. H. L. Schaefer of West Salem were honored at a dinner meeting at West Salem on June 19th. The West Salem Rotary Club, Edwards County Medical Society and others joined together to extend honor to these two physicians who have served their communities for fifty years. Dr. Andy Hall presented each of them with the Button of the Fifty-Year Club of the Illinois State Medical Society.

Many industrial plants and large manufacturing concers have requested that the Educational Committee furnish them with sufficient copies of the "DO YOU KNOW" column for posting on all plant bulletin boards. This service can be extended to cover all plants in Illinois.

DEATHS

J. G. Allan, Edgewood; University of Louisville School of Medicine, 1882. Died July 8, 1942 at the age of 83 years.

Sherman A. Askew, Peoria; National Medical University, Chicago, 1907. Died June 28, 1942 at the age of 67.

William S. Hector, Chicago; Rush Medical College, 1893. At one time on the surgical staff of St. Bernard's Hospital and professor of surgery at Loyola University School of Medicine. Died July 19, 1942 at the age of 54 years.

Maximilian John Hubeny, Chicago; Hahnemann Medical College and Hospital, Chicago, 1906; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1909; certified by the American Board of Radiology; secretary of the Section on Radiology of the American Medical Association from 1923 to 1926; member of the American Roentgen Ray Society; member and past president of the Radiological Society of North America, Chicago Roentgen Society and the American College of Radiology; fellow of the American College of Physicians; professor of roentgenology and chairman of the department, Cook County Graduate School of Medicine; chief of the x-ray department, Cook County Hospital; formerly roentgenologist, Henrotin Hospital and the Municipal Tuberculosis Sanitarium; formerly editor of *Radiology*, and associate editor of the *American Journal of Cancer, Italian Journal of Radiology* and the *Cuban Journal of Radiology;* in 1931 was awarded a gold medal by the Radiological Society of North America for research; aged 61; died, July 2.

John Charles McMillan, New Berlin; Missouri Medical College, St. Louis, 1898; Died May 15, 1942, in Rocester, Minn., at the age of 68.

Walter A. Maguy, Chicago; Hahnemann Medical College and Hospital, 1912. Died July 18, 1942 at the age of 56.

William J. Moldenhauer, Chicago; University of Illinois College of Medicine, 1906. Member of the staff of the Lutheran Deaconess Hospital. Died June 30, 1942, aged 60 years.

Francis M. Payne, Chicago; Hospital College of Medicine, Louisville, 1922. Died of a heart attack on July 27, 1942 at the age of 60 years.

Leslie W. Schwab, Chicago; University of Illinois College of Physicians and Surgeons, 1896. Attending physician and surgeon at Jackson Park Hospital. Was awarded an emeritus membership in the Illinois State Medical Society in 1938. Died July 11, 1942 at the age of 76.

Louis Carl Sondel, Chicago; Loyola University School of Medicine, 1915. Visiting staff of American and Edgewater Hospital. Died of a heart attack June 17, 1942, at the age of 51 years.

Frank E. Strickling, Decatur; Keokuk Medical College, College of Physicians and Surgeons, Keokuk, 1907. Served as a first lieutenant in the medical corps in the First World War. Specialist in otolaryngology for past 25 years. Died June 24, 1942 at the age of 56.

John B. Wickensimer, Steger; Chicago College of Medicine and Surgery, 1913. Died June 18, 1942 at the age of 54.

Charles Walter Winne, Chicago; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1903; aged 65; died, April 8.

Charles Edward Windeler, Chicago; Medical College of Ohio, Cincinnati, 1900; aged 64; died, May 9, of organic heart disease.

INTOLERANCE TO DIETHYLSTILBESTROL

Nausea and vomiting have been the most frequent side-effects following administration of Stilbesterol (diethylstilbestrol). A recent report (*Jour. A. M. A.*, 119:400, May 30, 1942) points out that there is a definite relation between these symptoms and the nausea and vomiting of early pregnancy. If one will merely take the time to ask the prospective patient if she had nausea and vomiting with a previous pregnancy, it would serve as a warning to give not over 0.25 mg. daily as an initial dose. Desensitization may be accomplished by giving 0.1 mg. tablets once daily for five days, then increasing the dose gradually until the therapeutic level is reached. Diethylstilbestrol, Lilly (formerly known as Stilbestrol) is available in 0.1 mg. tablets, as well as in larger doses, for oral administration.

DIVIDENDS IN MAN POWER

A very considerable part of our fighting and productive force is the direct result of reduced mortality since the beginning of the century; and this in turn is to be credited to our organized public health effort and the remarkable advances of medical science in past decades. This effort has saved millions of babies, children, and young adults, so that now the numbers available for the fighting forces to defend the country, and for production in factory and field, are much larger than would have been possible under health conditions prevailing among us 40 years ago.

To obtain a numerical measure of what the improvement in our health conditions means in terms of man power, an estimate was made of the number of men of draft age present among us today, who owe their existence to the improvement in mortality since the beginning of the century. Taking into account on the one hand the survival rates which actually operated in the intervening years, and on the other the survival rates that prevailed at the beginning of the century (when men now 40 years old were born) it is found that 11 per cent of men between the ages 20 and 44 are among us simply because of improvement in mortality experienced since 1900. *Reprinted from Statistical Bulletin, Metropolitan Life Insurance Company, February, 1942.*

The hardships of war, its unhealthy crowding together of men, furnish ideal breeding ground for the spread of infection. Hence the paramount importance of preventing the enlistment of any individual who is an actual or potential carrier of tuberculosis. This statement bears equal weight in regard to those large civilian concentrations which develop under the stimulus of war industry. In these two spheres preventive measures are imperative. Total defense will not permit us to neglect them. It may be admitted that any army fights on its stomach, but it fights on its lungs and heart as well. Impair these and food alone will not compensate for the loss. Kendall Emerson, M. D.

During the first two years of the war (England) deaths from tuberculosis increased in Glasgow about 41 per cent. The 1941 record shows no improvement. Overwork, strain, ill-spent leisure are thought to be responsible for the rise.—S. Laidlaw, M. D., and D. MacFarlane, M. D., *British Med. Jour., Sept.*, 1941.

DEXTRI-MALTOSE
Is Tested Bacteriologically During Every Stage



BEFORE DRYING



AFTER DRYING



EVERY day that Dextri-Maltose is manufactured, control samples for bacteriological analyses are secured from certain points in the process which experience has shown give an accurate picture of the bacteriological condition of the product in the different steps of its manufacture. As a result of experiment and long experience, it has been demonstrated that by exercising certain strict sanitary control measures and precautions, the bacteria count can be reduced to the point where the finished product approaches practical sterility



In infant feeding the physician protects the vitality and resistance of the organism in every way possible, by using pasteurized or boiled milk, boiled water, and sterilized bottles and nipples. He therefore naturally prefers to increase this margin of safety by specifying Dextri-Maltose which is bacteriologically safe. Here where the life and health of the infant and the reputation of the physician are in the balance — VALUE, NOT PRICE, IS THE TRUE MEASURE OF ECONOMY.

Mead Johnson & Company, Evansville, Indiana, U.S.A.

Eternal Vigilance Makes Dextri-Maltose Safe

Please enclose professional card when requesting samples of Mead Johnson products to cooperate in preventing their reaching unauthorized persons.

Book Review

Essentials of Endocrinology, By Arthur Grollman, Ph. D., M. D., Associate Professor of Pharmacology and Experimental Therapeutics in the Medical School of the Johns Hopkins University, Baltimore. Cloth. Price $6.00. Pp. 480. Philadelphia. J. B. Lippincott Company, 1941.

This book is divided into a preface and five parts. The author wisely says that endocrinology can be reduced to "as lucid a presentation as any other fundamental science." Part I deals with the endocrine glands of the cranial cavity —the pituitary and the pineal. Three sections of this are devoted to the anatomy, physiology, and pharmacology of the anterior and posterior lobe and one to the diseases of the hypophysis. Part II deals with the branchiogenic organs— the thyroid, parathyroids and the thymus. Part III deals with the endocrine organs of the abdominal cavity—the pancreas (insulin, diabetes mellitus, hyperinsulinism) and the adrenals. Part IV deals with the hormones of the reproductive system and Part V with the hormones dervied from non-endocrine organs. These last have little interest for the clinician except the tissue extracts, liver extract and kidney extract, and these are discussed too briefly to be helpful.

The book is well written and discusses the anatomy, comparative anatomy and physiology of the endocrine glands in an interesting way and gives an excellent survey of the experimental field. The clinical aspects of endocrinology are too briefly and too generally discussed to be very helpful to the man in private practice. For men having only a general interest in the field of endocrinology, this book will be a very helpful and worthwhile addition to their library.

Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

Principles Of Extraperitoneal Caesarean Section By James V. Ricci, A. B., M. D., Associate Clinical Professor of Gynecology and Obstetrics New York Medical College; Fellow New York Academy of Medicine, and James Pratt Marr, M. D., F. A. C. S., Associate Attending Surgeon, Woman's Hospital in the State of New York; Fellow New York Academy of Medicine. The Blakiston Company, Philadelphia. Price $4.50.

Treatment In General Practice. By Harry Beckman, M. D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wis. Fourth Edition, Thoroughly Revised. Philadelphia and London. W. B. Saunders Company, Price $10.00.

War Gases Their Identification And Decontamination. By Morris B. Jacobs, Ph. D., Food, Drug and Insecticide Administrator, U. S. Department of Agriculture, 1927; Chemist Department of Health, City of New York, 1928; Formerly, Lt. U. S. Chemical Warfare Service Reserve. Interscience Publishers, Inc., New York, N. Y. Price $3.00.

Physical Chemistry For Student Of Biochemistry And Medicine. By Edward

(Continued on page 28)



Effective by Mouth
Uniformly Potent
Economical

DIETHYLSTILBESTROL (*Breon*)

BREON

The Breon Research Division took part in the exhaustive testing of diethylstilbestrol. The Division devised an accurate method of assay and the drug is produced completely in the Breon laboratories. Every precaution is taken to insure its chemical purity and its potency.

Orally administered, diethylstilbestrol (also known as stilbestrol) reproduces all of the therapeutic effects of injected, naturally occurring estrogens. In the menopause, it controls the vasomotor symptoms, overcomes emotional instability, and improves the psychic attitude of the patient. The drug may be given intramuscularly or intravaginally as well.

The best administration avoids amounts of diethylstilbestrol in excess of the individual's need. When early treatment consists of one 0.2 mg. tablet a day and the number is increased slowly, nausea and other disagreeable symptoms seldom occur.

SUPPLIED IN: TABLETS of 0.2, 0.5, and 1 mg.; in AMPULS of 0.5 and 1.0 mg.; and in SUPPOSITORIES of 0.5 mg.

George A. Breon & Company
Pharmaceutical Chemists
KANSAS CITY, MO.

BOOKS RECEIVED (Continued)

Staunton West, Ph. D., Professor of Biochemistry in the University of Oregon Medical School, New York, The MacMillan Company. Price $5.75.

THE MEDICAL APPLICATIONS OF THE SHORT WAVE CURRENT, By William Bierman, M. D., Attending Physical Therapist, Mt. Sinai Hospital, New York City. With a Chapter on PHYSICAL AND TECHNICAL ASPECTS, By Myron M. Schwarzschild, M. A., Physicist, Beth Ishael Hospital, New York City; Instructor of Physics in Radiology, New York University College of Medicine. Second Edition. The Williams & Wilkins Company, Baltimore. Price $5.00.

THE MEDICAL CLINICS OF NORTH AMERICA; July, 1942. W. B. Saunders Company, Philadelphia. July, 1942. Symposium on Industrial Medicine.

ARTHRITIS NOW LINKED TO RHEUMATIC FEVER

Evidence that chronic infectious arthritis in adults may have resulted from rheumatic fever in childhood was given the American Association of Pathologists and Bacteriologists by Dr. Archie H. Baggenstoss and Dr. Edward F. Rosenberg of the Mayo Clinic.

The two Mayo physicians felt that arthritis involves more than disease of the joints; that it involves the vital organs, the crippled joints being merely one expression of the malady.

They examined the organs of thirty patients who had had chronic infectious arthritis and found evidence of disease in the heart, kidneys, liver and other organs. There was damage to the heart in twenty-four cases and in sixteen of these the injury was indistinguishable from that caused by rheumatic fever. Also significant was the pathologic condition discovered in the kidneys. It was felt that heart and kidney damage was due to the same underlying set of causes.

Drs. Baggenstoss and Rosenberg concluded there may be a relationship between chronic infectious arthritis and rheumatic fever, typically a disease of childhood.—*Science News Letter,* April 25, 1942.

SULFA DRUGS CAUSE THYROID ENLARGEMENT

Enlargement of the thyroid gland in the neck and a decrease in its activity are caused by the sulfa drugs, Dr. Julia B. Mackenzie and Dr. C. G. Mackenzie, of the John Hopkins School of Hygiene, have discovered in studies of rats, mice and dogs.

Sulfaguanidine, sulfadiazine, sulfapyridine and, to a lesser extent, sulfanilamide, all caused the thyroid gland enlargement. Another sulfur-containing chemical, thiourea, had the same effect to an even greater degree. In the case of rats given sulfa drugs, the enlargement of the gland was accompanied by a decrease in its activity, as indicated by lowered basal metabolic rate.

The enlargement of the gland as a result of sulfa drugs was prevented by doses of thyroxin, the hormone produced by the gland. Iodine, however, which the gland requires for manufacture of its hormone, did not prevent the enlargement due to the sulfa drugs.

Whether the sulfa drugs prevent the formation of thyroxin by the gland or whether they destroy it after it has been produced is not yet known.— *Science News Letter,* April 25, 1942.

EYE FOR AN EYE

An important office of the surgeon is "to supply or repaire those things that are wanted by nature, through the default of the first conformation, or afterwards by some mischance." Therefore should "any man's eye happen to be broken or put out, and the humors spilt or wasted," so that there be no hope to restore the sight, yet the deformity of the eye may be covered by this means: "If that when you have perfectly cured and healed the ulcer, you may put another eye artificially made of gold or silver, counterfeited and enamelled, so that it may seem to have the brightness, or gemmie descencie of the naturall eye, into the place of the eye that is so lost." However, "if the patient be unwilling, or by reason of some other meanes cannot weare this eye so prepared, in his head, you may make another on this wise. You must have a string or wiar, or iron bowed or croocked, like unto women's ear-wiars, made to bind the head harder or looser as it pleaseth the patient."—*Barry J Anson, M. A., Ph.D., of Northwestern University Medical School on "Collected Works of Ambrose Paré."*

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154—Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60 Proc. Soc. Exp. Biol. and Med., 1934, 32, 241 — N. Y. State Journ. Med., Vol. 35, 6-1-35, No. 11, 590-592*

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ANTI-ROCKY MOUNTAIN SPOTTED FEVER SERUM ANNOUNCED BY LEDERLE

Rocky Mountain spotted fever, now reported as occurring in at least 37 states, can be successfully combatted by a preventive vaccine and a curative serum announced by Lederle Laboratories, Inc., 30 Rockefeller Plaza, New York City.

Highest incidence of the disease has been found in Wyoming, Montana, Oregon, and Idaho in the northwest and in Maryland, Virginia and North Carolina on the Atlantic seaboard.

Susceptibility to spotted fever is general in both man and the lower animals. The disease closely resembles endemic typhus fever. It begins with sudden chills and continuous, moderately high fever followed by gradual dropping of temperature; severe arthritic and muscular pains; and a profuse skin eruption, appearing first on the ankles, wrists and back, but rapidly spreading to all parts of the body. In the East, most cases occur in children during the summer months; in the West, adult cases are common in the spring.

Probably the majority of patients contract the disease from infected ticks from domestic animals, like horses, cattle, sheep and dogs. The western type of Rocky Mountain spotted fever is transmitted by the wood tick, *Dermacentor andersoni,* the eastern type by the dog tick, *D. variabilis.* Persons who are forced to travel into or who live in tick-infested areas, especially those who go out into the open fields in these regions, should be vaccinated at least ten days prior to expected exposure.

"Rocky Mountain Spotted Fever Vaccine *Lederle"* is prepared from chick embryo by the yolk sac method of Cox. During 1941 the chick vaccine was extensively used for the prevention of Rocky Mountain spotted fever in humans, with results equally as good as those described with the tick vaccine, previously used. The U. S. Public Health Service is now using the chick embryo vaccine in place of the tick vaccine at its branch laboratories in Hamilton, Montana.

Parker, reporting in the *Journal of the American Medical Association* for 1938 (Vol. 110, pages 1184 and 1273) after 15 years' use of Rocky Mountain spotted fever vaccine (tick type), stated that only 64 out of 15,000 vac-

cinated in an endemic area developed spotted fever.

Anti-Rocky Mountain spotted fever serum is intended for the treatment of acute cases of the disease. The serum should be given as soon as possible after the onset. "Anti-Rocky Mountain Spotted Fever Serum *Lederle*" is an immune serum obtained by injecting rabbits with the Cox yolk sac material and is refined and concentrated by the same procedures used to purify anti-pneumococcal rabbit serum.

CO_2 NOT ENTIRELY WASTE IN ANIMAL

The Eli Lilly Prize of $1,000 in biological chemistry has been awarded by the American Chemical Society to Dr. Earl A. Evans, Jr., 32, of the University of Chicago. Dr. Evans used "tagged atoms"—radioactive "heavy" atoms that can be traced through the system—to discover that carbon dioxide is used in many types of animal cells, thus revolutionizing previous theories. Plants use carbon dioxide as food, but it has been considered entirely a waste product in the animal body. Dr. Evans is a graduate of Johns Hopkins and Columbia.

SOURCES OF VENEREAL DISEASE SOUGHT

To emphasize to the physician the importance of eliciting information about sources of infection and contacts from each of his patients with venereal disease, a special sticker is being used by the Bureau of Social Hygiene of the New York City Department of Health. These stickers, printed in red, are affixed to the official venereal disease case report form (form 417V) as a constant reminder of the physician's responsibility in the epidemiology of these infections.

The copy on the sticker reads as follows:

"Think! From whom did patient receive infection (source)? To whom did patient transmit infection (contact)? Report now!"

The Bureau, on request, assigns a trained epidemiologist to the physician. This investigator acts as the representative of the physician in bringing sources of infection, contacts, and lapsed-from-treatment patients under his treatment.—*N. Y. State J. M.*, July 15, 1942.

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AFTER FIRST AID, WHAT?

"It is estimated," say Dr. C. J. Potthoff and Mr. Paul Carroll, judge of the District Court, Minneapolis, in an article in *Minnesota Medicine,*[1] "that 15,000,000 people will receive first aid training during 1942." What are the possibilities of encountering legal difficulties in the performance of first aid? Inasmuch as physicians often teach these classes and will, in a catastrophe, have lay first-aiders as assistants, can the physicians answer such questions as the following:

In case of an accident, is a bystander required by law to render first aid?

Suppose a bystander at the scene of an accident renders assistance. Can he be held liable for injury suffered due to incorrect care given?

If a person in rendering first aid initiates action resulting in expense for care, can he under any circumstances be held liable for the expense payment if the injured person refuses to pay?

Must an accident victim be left lying immediately at the accident scene until authorities such as the police or coroner or medical examiner arrive?

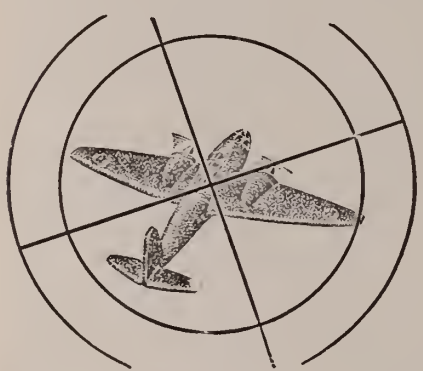
What is the law pertaining to notification of police authorities in the case of an accident?

Under what circumstances should the coroner or the medical examiner be notified?

Suppose a seriously injured victim refuses an offer of assistance extended by a first-aider. Shall assistance be give anyhow?

"The Law," said Sir William S. Gilbert, "is the true embodiment of everything that's excellent. It has no kind of fault or flaw . . . ." but it differs in many localities, and under various circumstances. It might be well for the physicians of this state who are teaching first aid to acquaint themselves with as much of it as is applicable to the rendering of first aid by lay people both in times of peace and now, under the provisions of the Ostertag Bill, the War Emergency Act, effective in this state since May 1, 1942.—*N. Y. State J. M.,* July 15, 1942.

1Legal Aspects of First Aid by Lay People, Minnesota, Med. 25: No. 6, 448 (June) 1942.



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(Continued on page 42)

INDUSTRIAL HYGIENE AND THE WAR

The recent joint meeting in Washington, D.C., of the National Conference of Governmental Industrial Hygienists and of the Subcommittee of Industrial Health and Medicine, Health and Medical Committee, Office of Defense Health and Welfare Activities, brought out many problems that are of vital interest in the present emergency.

The five major points raised by various speakers were as follows: workers, individually and collectively, should serve as the fulcrum of all efforts to improve industrial health; the efficacy of medical, engineering, and chemical controls of occupational hazards has been proved; knowledge, experience, and organization are such that time-loss due to disability can be greatly reduced; threats to the health of war workers have increased, in many parts of the country, to a critical, or even desperate, stage; and to meet this emergency—that is, to avert disaster and to establish a condition of vigorous health among all workers—all the facilities for prevention and restoration must be expanded.

Figures released by the War Production Board showed that seven and a half million people are now employed in producing the implements of war and that double that number will be needed by the end of the year. This marked increase will intensify existing problems and will create new ones. For example, the need for medical and nursing services in small plants, which now employ about two-thirds of the industrial population and which, as a rule, fail to provide such services, will be even more acute. Furthermore, the employment of women will present difficulties that require a new approach, as will the introduction of new toxic substances, and longer working hours with shorter periods of relaxation.

State industrial-health officers praised the aid furnished by the government—both financial and other— and affirmed that they had the knowledge and the spirit to markedly decrease loss of time due to disability; however, they acknowledge that they were tremendously handicapped by a lack of personnel—physicians, engineers, chemists and nurses.

Since the outcome of the war depends on the production of its instruments, all agencies—federal, state, and industrial—must cooperate in every possible way to increase productive efficiency by improving the health of war workers.

And, after the battle has been won, this service, which is the fundamental right of the millions of industrial workers in this country, should be continued.—*New England J. Med.*

TUBERCULOSIS "CURE"?

Successful vaccination of children against tuberculosis, reported recently in newspapers, holds no immediate hope of a "quick cure" of adult victims of the disease. This was the statement released by the Department to newspapers shortly after an announcement of an experiment among Chicago children with Bacillus Calmette-Guerin vaccine.

The Department pointed out that experiments with this tuberculosis vaccine have been carried on since 1906. Efforts of experimenters have been to weaken a virulent strain of tuberculosis organisms produced in cattle to a point where a vaccine made from them will confer immunity in humans. There is always the possibility that the vaccine may become virulent and dangerous to use and European experiments were halted for several years after disaster attended the vaccination of infants in Lubek, Germany, in 1922. Careful work has been carried on at different points in the United States over a period of years, and the results obtained have been disputed by other equally careful workers. Similar reports of success have been made previously.

Until such time as the use of this vaccine is sanctioned by the American Medical Association, said the Department, people should not place many hopes on its effectiveness as a tuberculosis cure or preventive.—*J. M. S. M. S.* (Michigan), July, 1942.

An aged Scotswoman, writing her thanks to the "Bundles" branch in Hoschton, Georgia, added a few words telling what she did during a raid. "When the air-raid warning sounds," she wrote. "I take the Bible from the shelf and read the Twenty-third Psalm. Then I put on a wee bit o'prayer. Then I take a wee drap o'whiskey to steady my nerves. Then I get in bed, pull up the covers and say, 'to hell with Hitler'." —*The Lion Rampant, published by Bundles for Britian, Inc.*

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TUBERCULOSIS IS AN OLD AND DANGEROUS ENEMY

It lies in wait particularly for the young adult, whose services today and after the war must be of supreme value to the nation. Tuberculosis always increases in wartime, and measures must be taken now if the increase that we may expect in the near future is to be stemmed. Existing tuberculosis services deal with those who have symptoms of disease, or who feel ill. A new advance is now needed. This means finding cases in which the disease has started, but not yet caused the patient to feel ill. Often nothing may be necessary other than careful watching; in some, short treatment is required, but in all cases there is better hope of eradicating the disease.—From *Bul. Nat'l Assn. Prev. Tuber.*, Eng., Jan. 11, 1942.

MINNESOTA MEDICINE

A CALL TO COLORS

The doctor who remains at home and cares for the sick people there will suffer the real strain of this war. It is necessary to see that the armed forces are furnished with the necessary complement of doctors, whether or not the other responsibilities of the government in such particulars are met fully. That is so because the armed forces will be, presumably and at any time, in a position where they cannot supplement their supply of doctors. They must be able to take care of something like the anticipated peak load at any time. There has been some criticism of the demand of the Army for six doctors per 1,000 soldiers. That is not a fair criticism, and for the reason just stated. At that, quite possibly the armed forces will not at any time be supplied with medical service one hundred per cent. We must remember, in this connection, that it is the Army and Navy which will be primarily concerned in winning the war, and if the war is not won, the lot of the people and their need for medical service will be deplorable, indeed, and that is not to say that the role to be played by the people at home is not important. Indeed, the contrary is true. The people must, through extra endeavor and sacrifice, support the Army in the field, something the Army cannot do for itself.—*Editorial, Texas State J. Med., June '42.*

HOW ONE SHOULD SELECT A PHYSICIAN

"The standards by which a physician can be measured are furnished by the medical profession. The way to judge a doctor is the way doctors judge each other. It is severe," Greer Williams, Chicago, points out in the June issue of *Hygeia, The Health Magazine,* in an article enumerating some of the many factors that should be taken into consideration in selecting a physician. "The medical profession has set high standards for its members. . . . .

"Let us first consider what we have a right to expect from a man who assumes the responsibility for health and disease. A noted specialist told me that he demands three things from his fellow physicians and surgeons in this order:

"1. Honesty. Faith in one's doctor is often more important to recovery than the treatment he prescribes, but it is false security if the physician is dishonest in his claims, intent, diagnosis, treatment, or fees. . . . .

"2. Service. Careful examinations take time. You want a doctor who will give you enough attention to leave the smallest possible likelihood that he has missed some significant sign or symptom, as well as to relieve your psychologic anxieties.

"3. Knowledge. When you see a physician you want everything that is known in medical science about the detection, prevention and cure of your ailment to be brought to bear on your case. Some might place knowledge first, but the specialist put it third because you cannot get the benefit of existing knowledge unless the physician is honest (keeps within the limits of scientific knowledge) and gives you service (allows himself to apply his knowledge). . . . ."

To this list of characteristics Mr. Williams says that he would add a fourth quality — generosity. "While this is implicit in the humanitarian nature of medical care," he declares, " I know of no quality more desired by the patient in his doctor. The basic problem of the cost of medical care is economic, of course, but more patients would get what they can pay for if generosity, like honesty, did not suffer from selfishness. . . . ."

In order to be most certain that a physician measuring up to these standards is selected, the author advises that "You should investigate the man you want to become your doctor, using the standards by which the medical profession judges its members.

"First there are the formal standards set by the American Medical Association. . . . . The American Medical Association, more than any other agency, must be credited with raising the quality of medical practice in this country. It has set high standards of education, training, and experience for physicians. . . . ."

In addition to the formal standards of the American Medical Association, such as graduation from a recognized medical school and membership on the

staff of a hospital approved by the American Medical Association, Mr. Williams says that there are additional informal standards by which the physician can be judged. These include lack of advertising on the part of the physician of his name, specialty, methods, cures, or low fees in any commercial way; the dignity, sobriety, and modesty with which he conducts himself before his patients; the neatness and cleanliness of his office and of his person; the efficiency with which he keeps his case records, and the amount of respect he receives from other doctors.

"A good doctor," Mr. Williams observes, "will not charge you too much. . . . .Always ask the doctor his fees for any medical care he proposes to give you and always tell him your financial status. Doctors' fees are more or less standardized according to the patient's income, and the best is not likely to charge you more than the worst for a given treatment or operation. . . . ."

DEATH FROM HOME TREATMENT WITH ELECTRICAL DEVICE

"Any sort of self treatment by electric devices—home made or procured from unscrupulous manufacturers or their sales agents—may cause death by electrocution when applied by inexperienced and unskilled lay persons," Richard Kovacs, M. D., New York, warns in *The Journal of the American Medical Association* for June 6.

Dr. Kovacs' admonishment is contained in a report on a Long Island, N. Y., clergyman who was found dead in his room, a victim of an attempt to treat pain in the back of his neck with a violet ray machine. Undoubtedly he had "grounded" the machine in the mistaken belief that by so doing he would increase the strength of the current and thus the efficiency of treament.

Norman Anthony, brilliant writer and editor, who, though an acknowledged hypochondriac, paradoxically enough shies from all doctors and things medical, is now editing a rare magazine. *The Funny Bone* is its title, and its mission is to keep impatient patients patient while waiting for the doctor to see them.—*J. of the Medical Society of Cape May County.*

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HOSPITAL GROWTH TRIPLED OVER THIRTY-ONE YEAR AVERAGE

American hospitals grew three times as fast last year as during the previous thirty-one years, according to the tweny-first annual hospital survey of the Council on Medical Education and Hospitals of the American Medical Association.

For thirty-one years, the report says, the average net increase in hospital facilities was around 25,000 to 30,000 beds each year. The increase between the censuses of 1940 and 1941 was 98,136 beds, which is "astonishing even for this unusual period."

This growth, the report continued, is equal to construction of one 269-bed hospital every day, Sundays and holidays included, for a year.

Total capacity of registered hospitals was 1,324,381 beds and 66,163 bassinets. There are 98,136 more beds and 4,224 more bassinets than a year ago; reports were received for 6,318 registered hospitals out of a total of 6,358.

Results of a survey in January of this year of blood and plasma banks in approved hospitals showed that 462 of 1,070 such hospitals either had one or the other of these facilities or were in the process of establishing them.

Two hundred and six hospitals maintain both blood and plasma banks, with seventeen others in the process of development. In addition, there are 171 hospitals operating plasma banks and thirty-three separate institutions with blood banks.—*Science News Letter,* April 25, 1942.

CARTE BLANCHE

A man enters a restaurant in Rome and notices roast chicken, roast pork, steak and other excellent foods on the menu. He is told, upon ordering each, that the restaurant doesn't have any. "Then what have you?" he asks.

"Macaroni is all," says a waiter.

"Then why do you put roast chicken, roast pork, steak and everything else on the menu?" he demands.

"Only for an appetizer," says the waiter.

—*New York Post.*

Mere bodily fitness is not the real thing we need most. If we could only develop a few military naval geniuses it would be much better for national security. A great many of the world's greatest officers would have been rejected by the draft boards:

Name	*Reason for Rejection*
George Washington	False Teeth
Bismark	Overweight
Napoleon	Ulcer of the Stomach
U. S. Grant	Alcoholism
Julius Caesar	Epilepsy
Horatio Nelson	One Eye, One Arm
Kaiser Wilhelm	Withered Arm
Genghis Khan	Paranoia
Duke of Wellington	Underweight

—Dr. Logan Clendening, "The State of the Nation's Health," *Nation's Business.*

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OBESITY FROM GLAND INJURY

Injury to the hypophysis, small but important gland embedded beneath the brain, is capable of causing dwarfism and great bodily fatness, Dr. Albert W. Hetherington of Northwestern University Medical School told his colleagues. . . . His findings were based on experiments with rats, whose hypophyses were purposely injured by surgical means. The rats were subsequently killed and the glands microscopically examined. Five animals, in which the glands had been entirely destroyed, had developed as fat dwarfs; the remaining three, which had small fragments of their hypophyses, had developed normal body length, but these also were very fat.—*Science News Letter,* April 11, 1942.

MINNESOTA MEDICINE

WHEN A FELLOW NEEDS A FRIEND

(Letter received by *Dr. W. H. Bridges* of Mont Belvieu):

Dr.

Will you come down here & if you don't want to come down here please send me something for my bowls as I ate some crabs yesterday & it done run into flocks. As I am passing blood and I would like for you to come & I got a throbbing from my stomach to my reactom & I sure am suffering. Please do something if you can.

P. S. If you can't do anything can I take som annasciptp.

MINUTE SULFATHIAZOLE CRYSTALS

Minute crystals (microcrystals) of sulfathiazole, a derivative of sulfanilamide, prepared by a new procedure, have been found to be more effective aids in treatment of surgical wounds and local infections than the ordinary large sized crystals of the drug, Leslie A. Chambers, Ph. D.; T. N. Harris, M. D.; Francis Schumann, M. D., and L. Kraeer Ferguson, M. D., Philadelphia, report in the May 23 issue of *The Journal of the American Medical Association.*

In certain procedures it is desirable to inject the sulfonamides through fine hypodermic needles, they explain. Usually this is not possible because of the large size and irregular shapes of the crystals. It was found that direct vibration did not reduce the size of the crystals. However, an indirect procedure involving sonic agitation has been developed which reduces the crystal size sufficiently to permit passage through 26 gauge needles. By sonic agitation is meant vibration by means of high frequency audible sound waves.

The authors say: "The results with the local use of the microsulfathiazole in thirty traumatic wounds and 57 cases of infection have been favorable. It was used in suspension in the abdomens of 19 patients with no untoward results. . . ."

JAPANESE DEATH RATE

The Japanese death rate is 17.4 per 1,000 as compared to 10 or 11 in the United States. Japan's present death rate, in fact, resembles ours of 1900. Individual causes of death in Japan are about as prevalent now as in this country about 1900. For example, the United States tuberculosis death rate now is 45 per 100,000. In Japan in 1937 the rate was 204, closely resembling our tuberculosis death rate in 1900 of 196. The picture is similar for diarrhea and enteritis. America has more than twice as many men to draw on in the military age group as Japan—25 million men from 20 to 34, as against Japan's 11 million in this age group.—*Science News-Letter,* Jan. 17, 1942.

1941 DROWNINGS HIGH

Figures recently released by the New York City Department of Health reveal that in 1941 almost three times as many persons were drowned bathing in New York City waters than in the preceding year. In 1940 there were twenty such fatal accidents, while in 1941 they totaled fifty-eight.

Of this number, three drowned in outdoor swimming pools, seventeen at bathing beaches, and thirty-eight in prohibited bathing areas. Because of the undue increase in such deaths, Dr. George T. Palmer, Deputy and Acting Health Commissioner, stressed the importance on the part of all in the observance of the law against bathing in prohibited polluted water, and also pointed out that those who visit the beaches where bathing is permitted should be more cautious than ever before.—*N. Y. State J. M.* July 15, 1942.

TUBERCULOSIS IN THE ARMY

Medical tests of Canadian army recruits are being sharpened to the point where today only about one out of 1,000 men develop tuberculosis after being accepted in the Army. Since May, 1941, a total of 895 men have been discharged from the Army because of pulmonary tuberculosis, but of that number 251 had served for several months before being x-rayed.—*Major G. T. Zumstein, Royal Canadian Army Med. Corps, Bull. Canadian Tuber. Assn., March, 1942*

Tuberculosis individuals can live their normal span of life or even exceed the recognized life expectancy. —*Arthur Rest, M.D., Amer. Rev. of Tuber., March, 1942.*

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SUGGESTS MEANS OF MINIMIZING RISK OF INJURIES TO SOLDIERS' SPINES

A means of minimizing the risk of members of the armed forces sustaining injuries to the cartilage between the vertebrae of the lower part of the spine is suggested by J. Grafton Love, M.M., Rochester, Minn., in the current issue of *War Medicine*, published by the American Medical Association in cooperation with the Division of Medical Sciences of the Natonal Research Council. Protrusions of such cartilages or intervertebral disks as they are called, may result in sciatic or low back pain which does not yield to ordinary treatment.

"A snugly fitting belt of the so-called sacroiliac variety or a snugly fitting canvas corset to support the backs, particularly of parachute troops, dive bombing pilots, those pilots whose duty necessitates their being catapulted from a ship and landing on an airplane carrier, and tank drivers, might serve to protect the vulnerable lower part of the back and prevent injuries to the intervertebral disk . . . and therefore decrease the number of protruded intervertebral disks which may otherwise occur," Dr. Love suggests.

He says that "the condition of protruded intervertebral disk, with consequent compression of the spinal cord and spinal nerves, is occuring among the armed forces with a frequency sufficient to warrant special consideration, and as the American military services, particularly the Tank Corps and the Air Corps, have become active under conditions of actual war, injuries to the intervertebral disks will occur more frequently.

The pain from this condition is usually in the lower part of the back. At the time of injury to the disk, the victim may feel, or in rare cases even hear, a snap in the back. At times, the victim even complains of loss of power in the lower extremities at the time of the onset of the protrusion, but more characteristically he has backache, and after a few days to a few weeks the pain extends down one sciatic nerve. The pain is usually accentuated by coughing, sneezing and straining at stool, and in about a fourth of the cases the pain is sufficiently severe at night to interfere with sleep.

"The treatment of protruded intervertebral disk." Dr. Love says, "is removal of the fragmented cartilage which is pressing on the nerve root or spinal cord. . . ."

JUST TEMPORARY

Seen by T. H. S. in the N. Y. Times

Arsenic and its compounds are poisonous. It might be supposed that the steady dripping of 1,200 mg. of mapharsen (arsen oxide) is attended with grave risks. But skin, liver, kidneys, blood-forming organs displayed no symptoms of poisoning in clinical observations that lasted eight years. There were occasional headaches, convulsions, and comas. Once in 400 treatments there was a death. But there was no evidence of any permanent damage.—*J.A.M.A.*

One of the most unusual uses of photography in war is as a record-making companion for the machine guns on fighting planes. A number of German and English planes are equipped with 16mm motion picture cameras synchronized with the machine guns, so that when the guns are fired the camera also shoots. Thus a permanent record is made to prove that an enemy plane has been hit, and all doubt is removed concerning whether or not a pilot should receive credit for destroying enemy craft.

—*American Photography.*

Four days after Franklin Roosevelt entered the White House in 1933, the late Mr. Justice Holmes celebrated his 92nd birthday. On that hectic day, with the banks closing and the shadows of the AAA and NRA hovering close, Roosevelt still found time to call on him. "You're the wisest man in America," he said. "What advice have you for a man who has become President of the United States during this crisis?" . . . "Young man," Holmes replied, "you are in a war. Fight like hell."

—Eliot Janeway in *Go*, New York.

One of the properties of chlorophyll (green coloring matter in plants) is ability to exclude harmful light rays which induce decay. Paper containers are now being treated with this element to keep fruits, vegetables in better condition. Experiments are under way to mix chlorophyll with rubber to give the latter longer life; prevent spoilage from exposure to light.

—*Quote.*

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Doctor: "I don't know her well enough yet."

—*J. A. M. A.*

OVERTIME

"That lawyer of mine has a nerve."

"Why so?"

"Listen to this item in his bill: 'For waking up in the night and thinking over your case—$5.00.' "—*Milwaukee Medical Times.*

WRONG DIAGNOSIS

The doctor was studying the menu as the waitress approached to take his order.

"Have you frogs' legs?" he asked.

"No, sir," she replied, "it's my rheumatism makes me walk this way."—*Exchange.*

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For a long time Cape Town's aldermen wondered how best South Africans could be reminded that the war was on.

At last they hit on an idea. Out of oblivion they brought the town citadel's old cannon, gave orders that at noon each day the historic weapon should be fired.

Ever since, at the sound of the gun's blast, the city's traffic lights have turned red, vehicles have stopped and pedestrians have halted. For two minutes every day the people of Cape Town thus stand still while loudspeakers volley the buglenotes of the Last Post.

The Remembrance Silence over, policemen blow their whistles, traffic and pedestrians move on. Shrewd observers say that people's reactions to the war can be guessed from behavior during those two minutes.

"Sound" citizens—i. e., those who back Prime Minister Jan Christiaan Smuts — stand rigidly to attention; Isolationists and potential Fifth Columnists are grumpy, restless, and secretly sneak puffs from their cigarettes.

—*News Review.*

A newly-inducted private wrote his family some few days after he had arrived at camp:

"I've gained sixty pounds since I came here — two pounds of flesh and 58 pounds of equipment."

—*Quote.*

A chemical weed killer which does not permanently injure grass, yet is claimed to rid lawns of practically all common weeds, is applied in liquid form by spraying it over the surface of the lawn. Exhaustive field tests of this material, known as Lawn Sinox, have been conducted in cooperation with agricultural colleges and experimental stations.

After a lawn has been sprayed according to directions, a temporary browning of the lawn grasses will be noticed. This condition exists for from several days to two weeks but the lawn grasses will fully recover while the weeds will not.

—*Scientific American.*

A comedian came on the stage in Berlin weeping and ejaculating.

"We are deprived of this and of that, no butter, no coffee, no soap, and all on account of that hound."

During the shocked silence that followed in rushed the Gestapo and hustled him off to the nearest police station. The comedian protested violently and said the police had made a mistake.

"Of course," he said, "I only had Churchill in mind, but who were you thinking of?"

—*Financial Post.*

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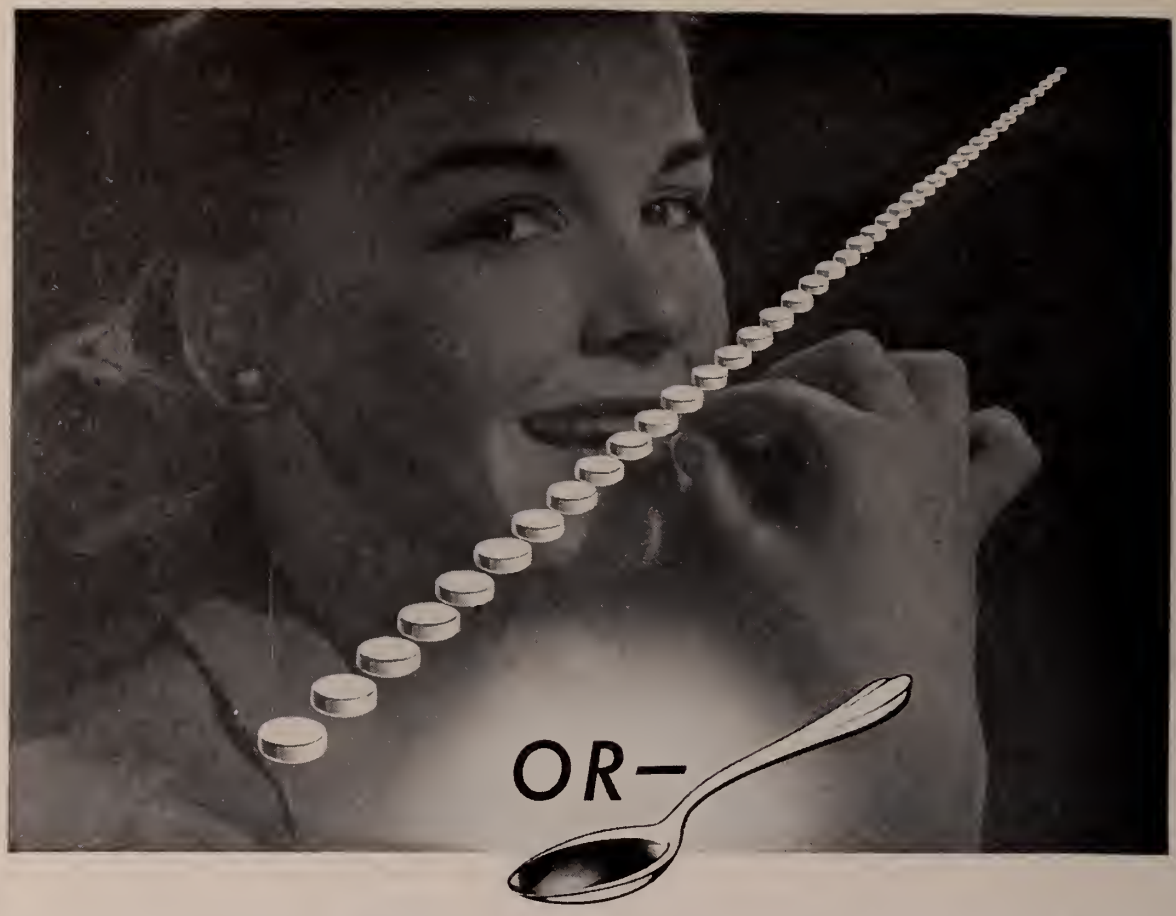
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Each tablespoonful of Wyeth's Elixir B-Plex is derived from 240 grains of special brewers yeast. If taken in tablet form this dose would require 40 six-grain brewers yeast tablets.

Several advantages are easily recognizable in this dosage form of the natural vitamin B Complex:

★ Rapid assimilation
★ Palatability
★ Single daily dose, if desired

Special methods of manufacture and storage insure full potency at all times.

The **NATURAL** VITAMIN B COMPLEX



*Wyeth's** ELIXIR **B-PLEX***

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Entered as Second-class Matter July 21, 1919, at the Post Office, Oak Park, Illinois, under the Act of March 8, 1879. Acceptance for mailing at special rate of postage provided for in Section 1102, Act of October 8, 1917, authorized July 15, 1918. Office of Publication, 715 Lake Street, Oak Park, Ill.

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Tuberculosis of the Adrenal

The original description of Addison's disease attributed the condition to tuberculosis of the adrenal. Recent autopsy series show that there may be other causes and that these account for a considerable proportion of the cases.



Normal Adrenal Cortex

The cortex of the adrenal gland is essential for life in human beings and in all animals which possess this gland. Its removal is fatal within a few days.

Sterile Solution Adrenal Cortex Extract (Upjohn)

Sterile Solution Adrenal Cortex Extract (Upjohn) is an extract of adrenal glands from domestic animals, containing the cortical steroids essential for the maintenance of life in adrenalectomized animals, but so purified that only traces, at the most, of epinephrine are present. Each cc. contains not less than 50 dog units of cortical activity (2.5 rat units) when assayed by the method of Cartland and Kuizenga (American Journal of Physiology 117:678, 1936).

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Sterile Solution Adrenal Cortex Extract (Upjohn) is supplied in 10 cc. size rubber-capped vials as a sterile solution for injection.



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Several phases of a *grand mal* epileptic seizure schematically pictured in the rare book, "Les Demoniaques Dans L'Art," by J. M. Charcot and Paul Richer, published in 1887.

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1. McEachern, D.: *Canadian Med. Ass'n. J.*, 45:106, 1941.
2. Lennox, W. G.: *Med. Ann. Dist. Col.*, 10:461, 1941.

Detailed literature upon request.

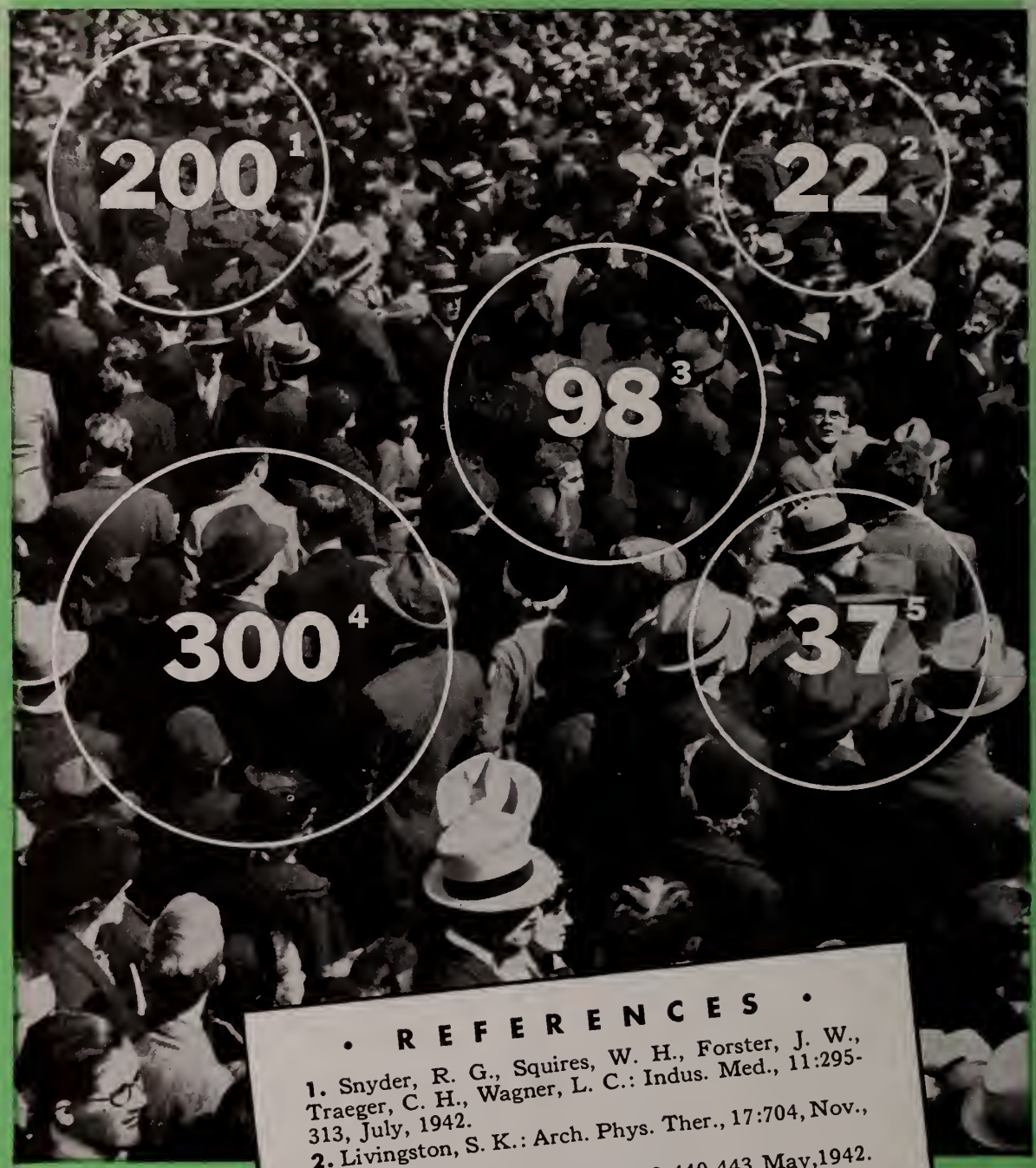
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• REFERENCES •

1. Snyder, R. G., Squires, W. H., Forster, J. W., Traeger, C. H., Wagner, L. C.: Indus. Med., 11:295-313, July, 1942.

2. Livingston, S. K.: Arch. Phys. Ther., 17:704, Nov., 1936.

3. Steck, I. E.: Ohio St. Med. Jl., 38:440-443, May, 1942.

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5. Reed, C. I., Struck, H. C., and Steck, I. E.: Vitamin D, pub. by University of Chicago Press, Chicago, Ill., 1939.

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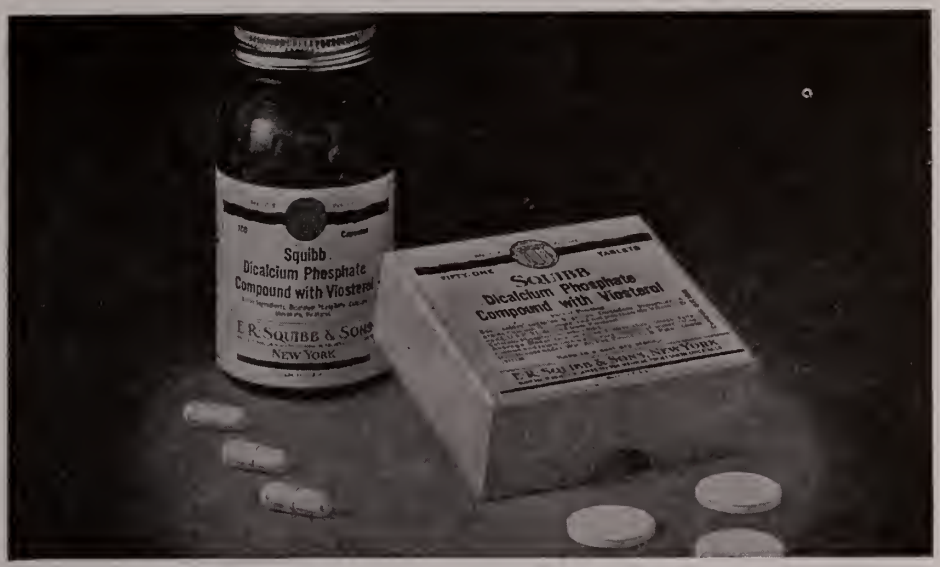
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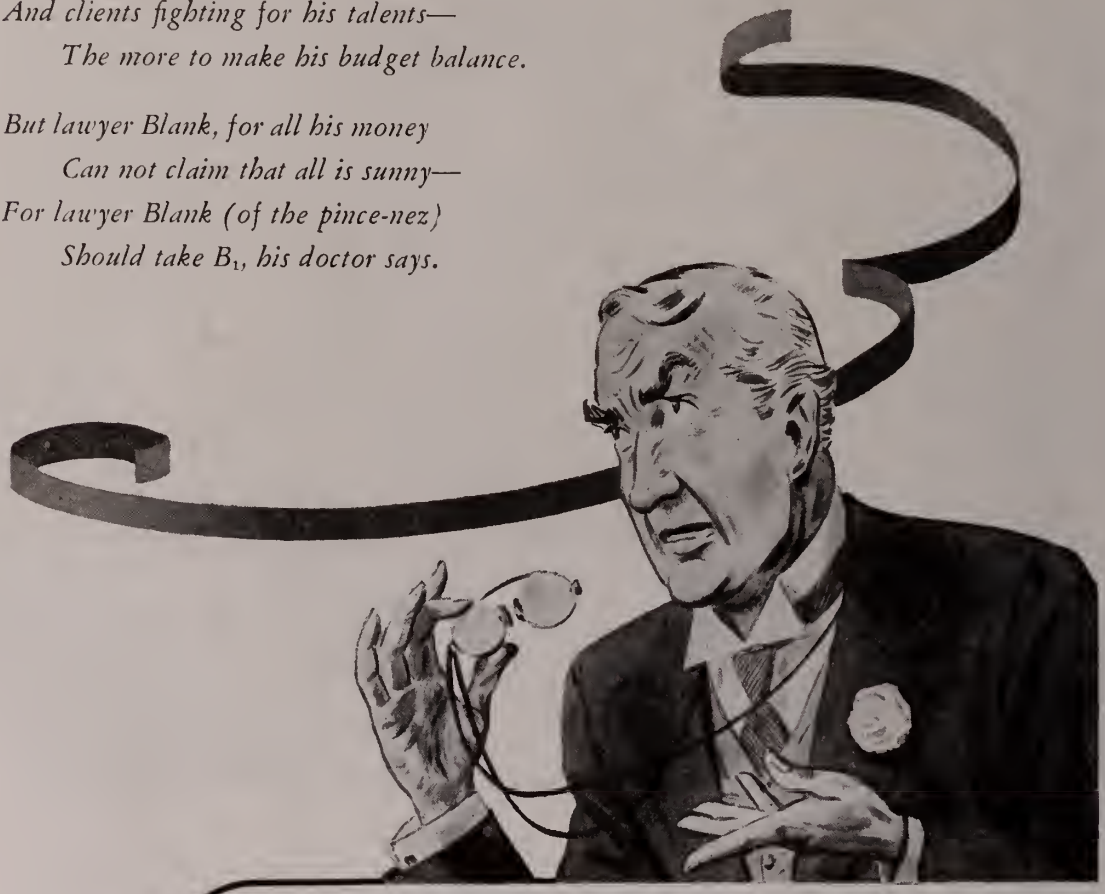
Literature and dosage schedules on request.

* *Lancet*, 1942, *1*:479.

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With scads of money in the bank
And clients fighting for his talents—
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Can not claim that all is sunny—
For lawyer Blank (of the pince-nez)
Should take B_1, his doctor says.



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and others, too, may require additional Vitamin B_1 daily.

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"CLINICAL EVALUATION of the American dietary indicates that large groups of our population live on diets on the borderline of adequacy of Vitamin B_1."[1]

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Wyeth's Bewon Elixir is a palatable elixir containing 500 International Units of Vitamin B_1 in each fluid ounce. It is available in pint and gallon bottles.

[1]Reimann, H. A.: Treatment in General Medicine, 1941 Progress Volume. Phila., F. A. Davis Co., 1941.

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The picturesque sobriquet of the race course aptly describes many a new drug that starts out like a whirlwind, only to come a cropper on the homestretch.

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Lederle

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Keyes and Shaffer[1] have recently commented upon a series of 60 patients who received Heparin, three quarters of whom suffered from pulmonary infarction. The value of Heparin was well established in these cases. The authors observed that hemorrhage into the pleural cavity is an occasional complication with this treatment, but this infrequent disadvantage is outweighed by the obvious advantages of the treatment and should not deter the physician from the use of Heparin.

Lam[2] has also observed Heparin to be clinically useful in post-operative infarction. Recently Priestley and Barker[3] have reviewed 1665 cases of several types of thrombosis or embolism, of which 897 cases were pulmonary embolism. The authors concluded that the proper use of Heparin in post-operative pulmonary embolism will prove life-saving in a substantial number of cases.

"Heparin *Lederle*" is also frequently used for the prevention of blood coagulation in blood transfusions; and is widely employed in clinical laboratories for the prevention of coagulation in blood samples, increasing the ease of handling and simplifying the use of a single sample for multiple determinations.

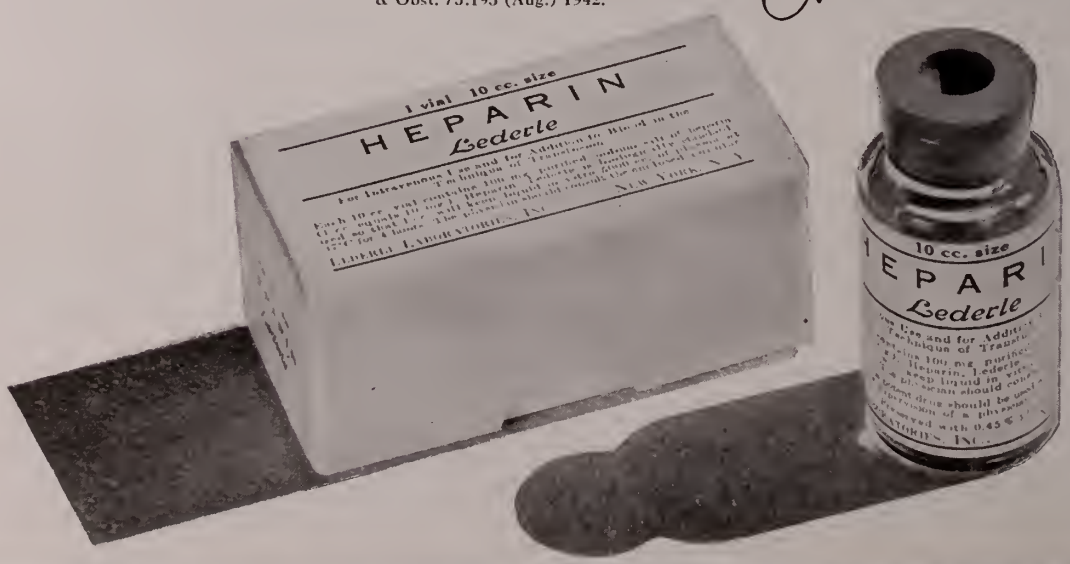
"Heparin *Lederle*" is a sterile isotonic solution of the anti-coagulant substance extracted from animal tissue. It is considered to be a mixture of mucoitin sulfuric esters.

Literature will be mailed upon request.

PACKAGES:
10 cc. vial.

[1]KEYES, J. W., and SHAFFER, C. F.: J. A. M. A. 119:882 (July 11) 1942.
[2]LAM, C. R.: West Va. M. J. 38:215 (June) 1942.
[3]PRIESTLEY, J. T., and BARKER, N. W.: Surg., Gynec. & Obst. 75:193 (Aug.) 1942.

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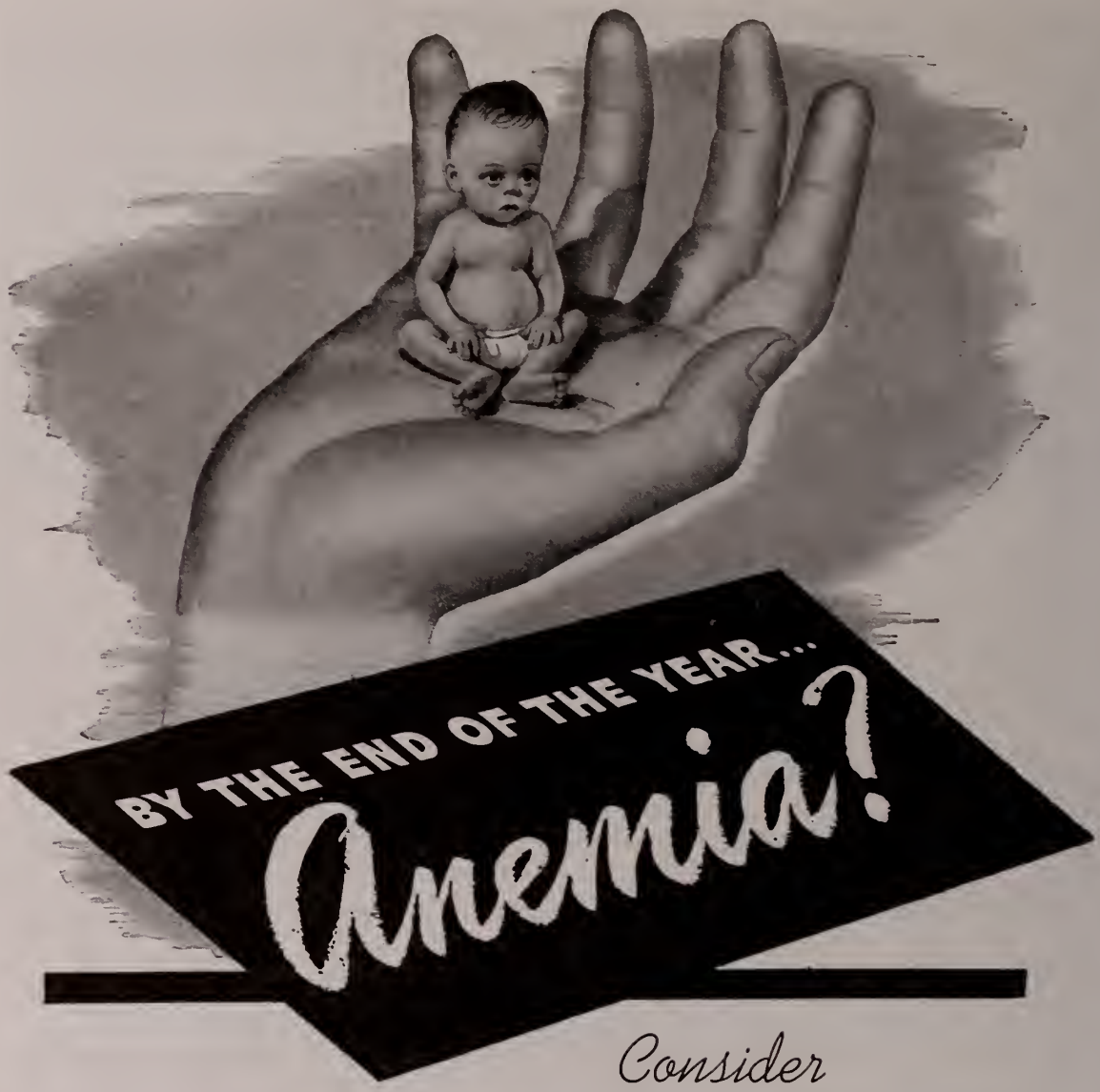
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1. Maurer, S., Greengard, J., and Kluver, C.: "The Value of Liver Extract and Iron in the Anemia of Young Infants." J.A.M.A. 98:1069:1932.

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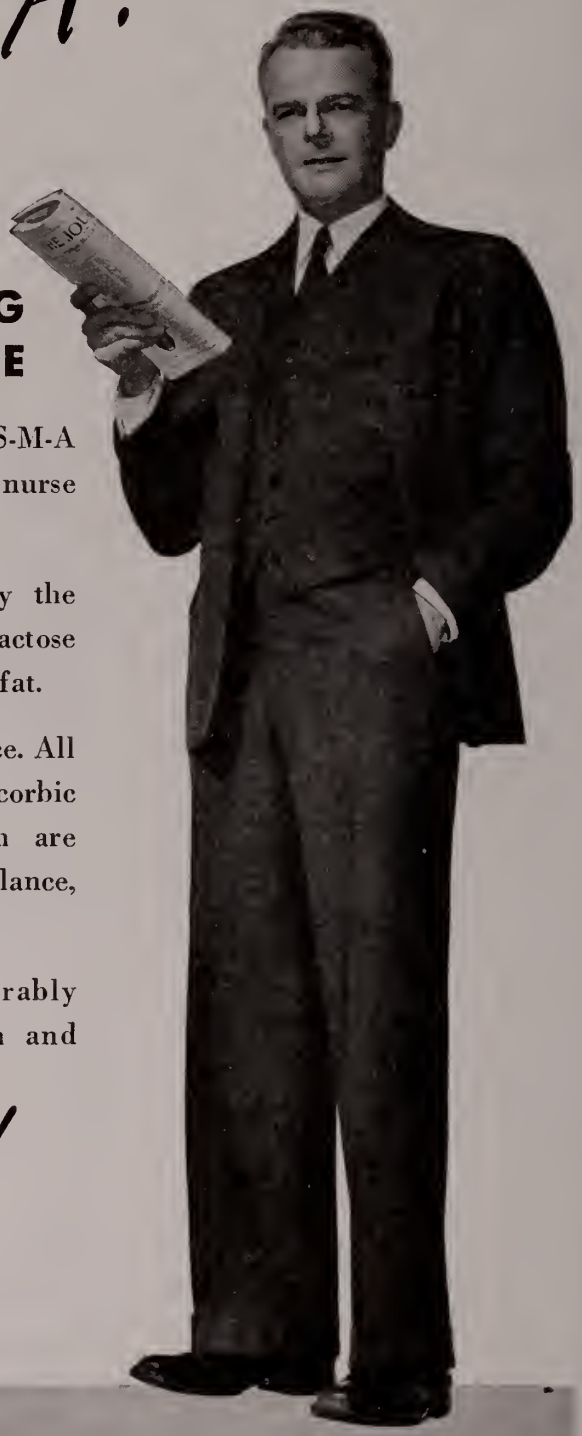
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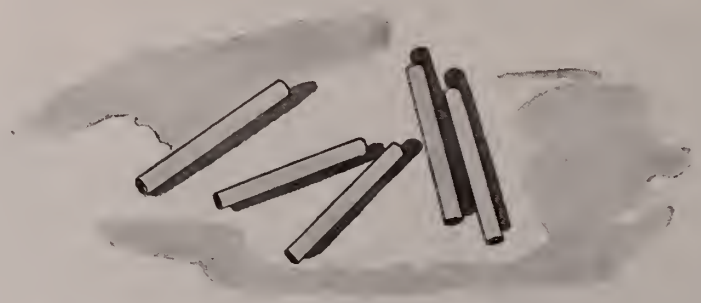
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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

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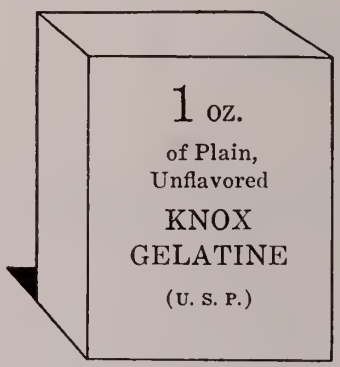
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Glycine	25.5
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Hydroxyproline	14.4
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*Leucine	7.1
*Lysine	5.9
*Methionine	0.97
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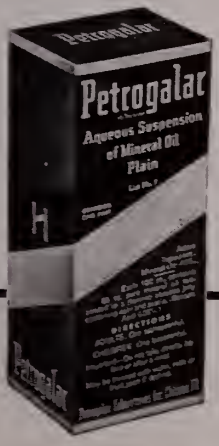
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It helps to soften thoroughly the stool and encourages regular, comfortable bowel movement. Petrogalar is acceptable even with "stuffy" patients because of its pleasant taste and ready miscibility in water.

It may be taken directly from the spoon or from a glass. Consider Petrogalar for the treatment of constipation.



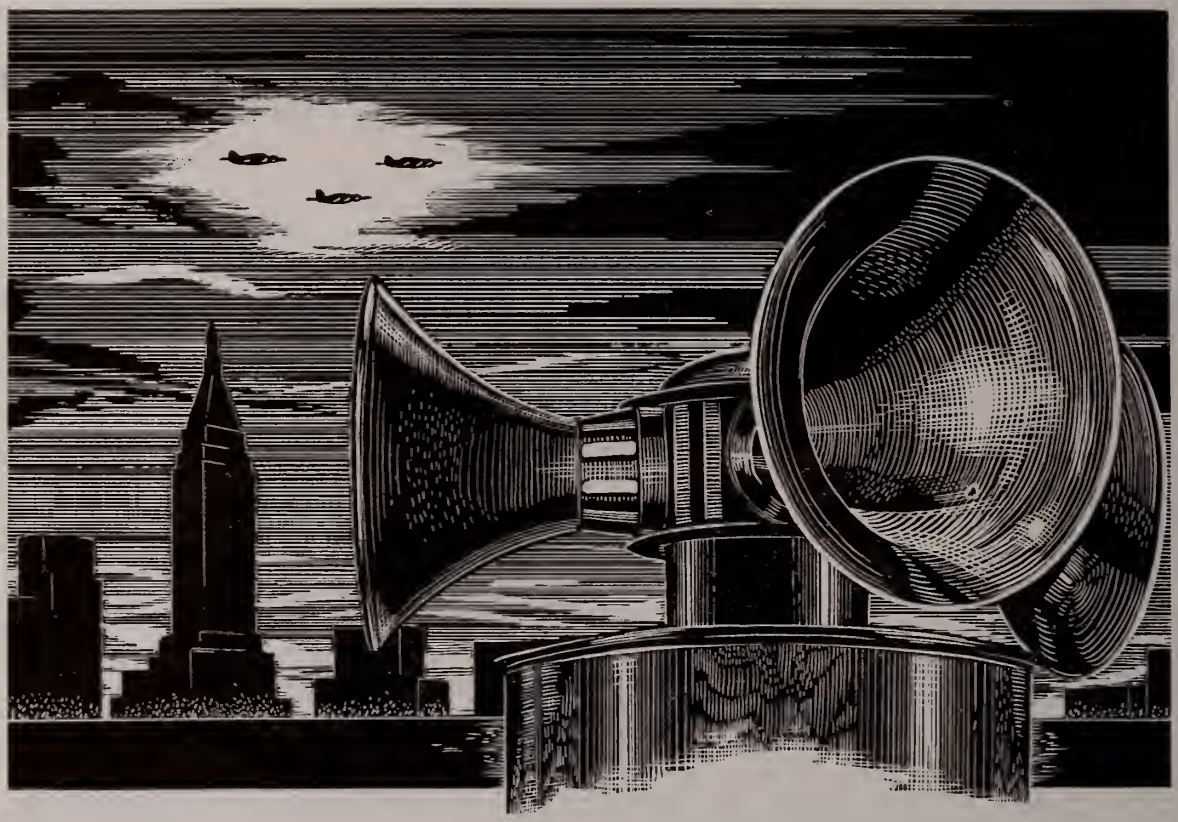
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Petrogalar

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ANNOUNCING

Trasentine-Phenobarbital*

Antispasmodic-Sedative

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The Illinois Medical Journal

September, 1942

VOL. 82, NO. 3

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

WANTED — A STANDARDIZED TREATMENT FOR BURNS

There is probably no condition which the medical practitioner is called upon to treat in his regular work that causes more anxiety than the treatment of burns. Physicians have been expected to tell at a glance the degree of the burn, then as suddenly, give an opinion as to the prognosis, duration of the disability and the permanent damage, if any, that may be expected.

Under normal conditions, burns are high on the long list of the commoner casualties and in times of war they probably occupy first place among casualties. With modern bombing, use of tanks, flame throwers, sinking of tankers, airplane disasters, and many other similar results of modern warfare, it is not surprising that burns must be given much consideration by the medical corps. Then at home, in connection with civilian defense, we are told that the management of burn cases occupy no little part of the time of the civilian physicians who care for casualties. It was stated that following the Pearl Harbor assault last December, nearly half of those admitted to hospitals were on account of burns, while many others with minor burns were treated at casualty stations, in the physicians office, or in their own homes.

During recent decades hundreds of new agents have been brought before the medical profession as the long sought panacea which would eliminate all of the objectionable features of the many preparations previously used, yet at this time, there is no universal agreement that any one of these preparations are superior to all of the others. The work of Davison and his experiences with the use of tannic acid in the treatment of burns reported in 1925 has resulted in a lessened mortality from burns, as well as a reduction in the permanent disabilities which are so commonly seen especially in the extremities.

Much information has been added in recent years to the store of knowledge concerning the pathologic and physiologic changes in the human body following the receiving of burns and it is true that with this data and the application of good judgment there has been an improvement in statistical reports following burns.

Burns rapidly produce shock and the nature of this reaction is now rather generally agreed upon, although it is not possible to state that an extensive burn with but little shock in one individual will be the same picture presented in another similar type burn case. The treatment of shock resulting from burns should be the first consideration of the attending physician. The rapid reduction of plasma volume is unquestionably a major factor in the production of

this shock. In cases of shock resulting from burns the immediate replacement of the lost fluid content, especially through the use of blood substitutes and particularly blood plasma or serum, should be the procedure of choice. With the rapid loss of plasma, there is frequently a relative increase in blood cells, and the immediate replacement of the fluid loss by whole blood is usually not advisable. It is true, however, that when anemia develops later, blood transfusions are definitely indicated. The relief of pain early in the treatment of shock from burns is likewise an important therapeutic necessity. Opiates perhaps in most cases, should be the agent of choice.

The most important secondary problem in the treatment of most cases of burns is undoubtedly that of infection, for in extensive burns there is invariably a large field which becomes an ideal medium for infective organisms to develop. The local treatment of burns requires the most careful aseptic technic, and this is perhaps second only in importance to the primary treatment of shock. Debridement of burned tissue under anesthesia, and with the most careful aseptic technic, is generally considered today as the ideal treatment. In recent years many local substances have been used successfully in burns. Some years ago the paraffine spray was quite popular, then with the work of Davison, the use of tannic acid as a spray, local application, or as a whole bath seemed to be generally accepted as the proper procedure. Cod Liver Oil ointments and other vitamin A products have been used by many who believe them to be ideal for the purpose. Silver nitrate and tannic acid, gentian violet, the triple dye preparations, and other similar local agents have been used with much success.

During the past three or four years with the ever increasing indications for the sulfonamides, their use has been extended to the treatment of burns both locally and orally, the latter principally in cases of secondary infection. There

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has been a variance of opinion in the manner and intervals of dressing the burn wound. Some have used paraffine mesh gauze, others plain sterile gauze, or paper dressings, these changed according to the preference of the individual physician daily, or perhaps left in situ for a period as long as two weeks. Depending on the anatomical area involved in burns, the use of splints may prove of definite advantage in the prevention of subsequent contractures and ultimate plastic repair, this applying especially to burns of the extremities.

Considering the importance of burns in war, as well as civilian practice, it is hoped that in the near future there will be a more generally accepted plan, standardized, simplified and generally agreed upon, for the treatment of this important causualty.

HEALTH IN INDUSTRY

At this time, with many hundreds of thousands working in the many essential plants throughout the country, all primarily interested in doing their part in defeating the Axis countries, it is highly important that more attention be given by the medical profession to these workers and to their working and living environment.

The U. S. Public Health Service is rendering all possible assistance in the development of plans which will improve the health of workers, and have developed some interesting literature on this subject. One of these recent releases, "Outline of an Industrial Hygiene Program" gives much information on the subject, and copies may be procured from the Division of Industrial Hygiene, National Institute of Health, U. S. Public Health Service, Bethesda, Maryland.

According to this outline, in planning for improved health, three general considerations must be kept in mind:

1. Conditions in the working environment (the plant).
2. Conditions in the living environment (the house and community).
3. Personal conditions (the health status of the individual and his ability to participate in the program).

"To make your industrial hygiene program effective, you need four types of service."

1. Medical
2. Engineering
3. Safety
4. Welfare

The brochure referred to above is devoted to a description of these services. With the ever increasing demands for production in these thousands of plants throughout the country, more attention must be given to these highly important considerations. It is quite obvious that the medical considerations are one of the most important of all, for the health of the worker must be constantly watched closely, not only his personal health, but also the highly important factors pertaining to his working and living environments.

Industrial physicians with training and experience sufficient for them to actually qualify as experts in this important field cannot be developed over night, and it is essential that more attention be given to this important field.

With this in mind, the Procurement and Assignment Service has been directed to develop lists in their respective states of physicians who have been declared ineligible for military service who are qualified for special types of work, and industrial medicine is one classification which should receive much attention. It was reported that some 12,000 physicians stated on their questionnaires that special attention had been given in their practice to industrial medicine, and this was given as first or second choice on the questionnaire. Special attention will be given to this request in the files developed through Procurement and Assignment, and as requests are made by industrial organizations for adequately trained personnel, the proper names will be supplied in the endeavor to get the available positions filled.

The Committees on Industrial Health of the respective state medical societies will assist in this work, and perhaps eventually take a leading part in re-location of physicians desired for this work.

Within recent weeks, some industrial organizations have requested of Procurement and Assignment that certain young physicians who have only recently joined industrial medical departments be deferred, but only in exceptional cases

is it deemed advisable to establish essentiality for physicians in this work who have not had at least two years service with the organization and who are devoting full time, or if on part time basis, not less than 40 hours each week in that service.

Plans have been developed recently to set up training centers for industrial health, so that physicians above draft age and those who have been rejected for military service may have additional training to permit their being able to qualify for industrial positions. It is possible that many women physicians, who up to now have not been permitted to apply for commissions in the medical corps, may be used to good advantage in this field.

INCREASING INTEREST IN MEDICAL HISTORY

Medical History has been the hobby of many physicians throughout the country for many years, and many physicians now living have seen the greatest developments in all branches of medicine that have yet been recorded. Illinois physicians have added much to medical knowledge during the past half century, and each year sees an increase in the research work within this state.

During the past two decades, the Illinois State Medical Society has had an official committee, whose principal duty has been the accumulating of historical data. Some years ago, under the supervision of the late Charles J. Whalen, and with the late Lucius H. Zeuch, the History of Medical Practice in Illinois was prepared and published by the State Medical Society. Dr. Zeuch devoted the larger part of more than two years touring the state, and procured first hand information on the medical pioneers of Illinois. Many photographs were taken by Dr. Zeuch, and many bits of historical data of interest to all historians were obtained.

It was the intention of the Society to publish this medical history in one volume, and subscriptions were solicited on that basis. Before the book was published, it was found that so much valuable data was procured that it could not possibly be published in one volume, and the Society decided to publish a second volume, without additional cost to the early subscribers. Soon after the publication of the first volume, with existing economic problems, it was deemed advisable by the Society to postpone work on a second volume. Later with a second World War apparently inevitable, the work was postponed for the duration.

The Illinois State Medical Society has a permanent Committee on Archives, which is continually endeavoring to procure all possible data concerning the work of physicians of Illinois. Many photographs of medical pioneers have been accumulated, and they will be retained permanently among the archives of the Society. Following the development of the Fifty Year Club, an effort was made to procure a biographical sketch of each of these members, approximately 350 to the present time. Photographs of this entire group have been desired by the committee, and to date many have been submitted, although there are still many who have not submitted a photograph for the archives.

It seems desirable now that the Committee on Archives should request photographs of all Illinois physicians in military service, and all county societies are requested to aid the committee in procuring them, along with data concerning the individual medical officers. The permanent committee on archives is composed of Drs. D. D. Monroe, Alton; Carl E. Black, Jacksonville, and P. J. McDermott, Kewanee.

Owing to the fact that the Society still has quite a few copies of the History of Medical Practice in Illinois, the Council recently advised the Secretary to offer them at the reduced price of $5.00. Physicians or others desiring a copy of this highly interesting volume, may procure a copy postpaid by sending a check or money order to the Secretary, Dr. Harold M. Camp, Monmouth, Illinois.

EDUCATIONAL COMMITTEE EXTENDS SERVICE TO INDUSTRIAL PLANTS

The Educational Committee recently offered to furnish industrial plans of the state with copies of its DO YOU KNOW bulletins for posting on employee bulletin boards. As a result of this offer more than two-hundred-and-fifty copies have been requested for posting every other week.

The replies received from the medical directors of these plants indicate the interest in the type of information released in this material:

"In reply to your communication of July 31st relative to 'Do You Know' bulletins, wish to state that I shall be pleased to receive these bulletins each week as stated therein. We shall appreciate any number of them that you see fit to send us."

"We have a bulletin board in our 18th Street Fred Harvey Commissary and I am sure that your 'Do You Know' bulletin will be helpful to our employees. By all means place my name on your mailing list and I will see to it that your bulletins will be placed on our bulletin boards not only in the Commissary but also our restaurants and dining cars. Send one dozen copies to start."

"Am in receipt of copies of your 'Do You Know' bulletin. Think they are fine. Would be glad to have my name on mailing list and please send me about six copies each time. I am Surgeon for Lehigh and Marquette cement plants here."

"In reply to your letter of July 31, I shall appreciate receiving six copies of the 'Do You Know' bulletin issued every other week."

"I would be pleased to receive five copies of these bulletins as they are published. I thank you for calling these bulletins to my attention and I am sure they will be of benefit to our Industrial Employees."

"Would you please place my name on your mailing list. I would be grateful if you would please send me two copies of every bulletin sent out, so that WE CAN HAVE THEM MIMEOGRAPHED AND GIVEN TO ALL THE EMPLOYEES."

"In view of the fact that I have enjoyed reading those that have already been published, may I ask that my name be added to your mailing list for all future releases. Thank you for your anticipated cooperation."

"I would be delighted and thankful if you would put my name on your mailing list and send me every other week one of these extremely educational bulletins."

"The 'Do You Know' bulletins are O. K. I would like to have copies for each of the following Industrial Plants as well as one for my office. (This doctor sent the names of six large industrial plants.)

"I find that I can use THIRTY 'Do You Know' bulletins, same to be placed on the bulletin boards in our various departments."

"Your letter referring to your 'Do You Know' bulletins is indeed interesting and I would be pleased to have two copies of each bulletin at my disposal. I assure you they will be made use of in the proper manner and I anticipate considerable benefit from them."

POINTS OUT THAT THOSE WITH DIABETES ALSO ARE DONG THEIR DUTY IN WAR

The patriot who cannot serve in the armed forces because of diabetes can and will perform his duty in the defense industries and thus will help to insure victory in the present war for our country, Anthony Sindoni Jr., M.D., Philadelphia declares in *Hygeai, The Health Magazine* for July.

"In the present war crisis," he explains, "every idle hand is a drawback to our country, and for this reason all people, even those who have diabetes, should be coordinated into the productive work scheme of the nation. Therefore, the coordinated effort of all who are able to work is a demand of our national emergency. The present crisis makes this demand, regardless of diabetes.

"Medical progress has made it possible to control those with diabetes to the extent that they can be regarded to a marked degree as healthy. However, one must bear in mind that the diabetic are classified into two main groups: (1) the noninsulin group, whose condition does not require insulin; (2) the insulin group, whose condition requires it. In those persons not requiring insulin there is no possibility of insulin reactions or shock, since the patient can control his diabetes with diet and general hygenic care. These patients, therefore, with proper instruction and care can perform the duties of a normal person with little or no difficulty.

"Hundreds of thousands of persons with diabetes require insulin for control of their diabetes. This group includes many of military age. But these also, under proper control, can be made to do the work of the normal person to a large extent. There are many normal persons who are of the opinion that a person with diabetes on insulin is likely to be unreliable because of his fear of insulin shock or of reactions. Actually, the likehood that a reaction may occur depends on the patient and doctor, because an intelligent person who follows his physician's instructions carefully and adheres to his diet knows the signs of unexpected insulin effects and understands their prevention. . . . He can certainly be engaged in the manufacture of war material to the same extent that he can be used in civil production. A recent survey of various plants, factories and mills which devote their time exclusively to defense work revealed that many of the diabetic are employed in doing work which requires exceptional skill."

Correspondence

TIRE RATIONING REGULATIONS FOR PHYSICIANS

Chicago Metropolitan Defense Area Office of Price Administration
228 N. La Salle Street, Chicago
August 14, 1942

Fred H. Muller, M.D., Secretary
Chicago Medical Society
Dear Doctor Muller:

This will acknowledge your letter of recent date, in which you request a copy of Amendment No. 7, in order to clarify the position of physicians and surgeons within the Tire Rationing Regulations.

In accordance with your request, we are enclosing copies of Amendments No. 7 and No. 17, which pertain to the eligibility of physicians and surgeons. Section 405 of List A, states, in part, as follows:

"Whereas the provisions under the previous regulations required only that the eligibles referred to needed and used motor vehicles * * * to make professional calls when their professional practice required such calls, the present requirement is that the vehicle on which the tire or tube is to be mounted is necessary for the performance of the applicant's professional duties, because of the absence of other practicable means of transportation. However, in the case of a professional such as physician or surgeon, if his professional practice requires his answering emergency calls, he may be issued a certificate to enable him to use his vehicle for transportation between his home, his office, or a hospital, even though other practicable means of transportation are available. Even in the absence of other practicable means of transportation, or in the event that the applicant's professional practice requires his answering emergency calls, the applicant must show that the vehicle is used *exclusively* for his professional duties."

Under the Revised Tire Rationing Regulations, all who qualify for tires must accept recapped or retreaded tires where recapping or retreading is possible. However, we wish to stress the importance of all applicants preserving the tires they now possess, and if at all possible, having them recapped when such service is indicated and by not using them until they are beyond repair. They may conserve their present tires in the following manner — driving carefully, keeping the tires properly inflated, and the car in proper alignment. All of these factors tend to conserve the rubber, which is the ultimate goal of the Rationing Program.

In the purchase of a new automobile, physicians and surgeons must definitely establish their need of a car. A 1939 or earlier model, or a car which has been driven more than 40,000 miles, is only one of the requisites upon which eligibility classification is based.

We submit the above information merely as a guide to you in informing your members of their status under the Revised Tire Rationing Regulations. We trust that we have been of some help in this vital problem.

Very truly yours,

Michael F. Mulcahy
Director, O. P. A.
Chicago Metropolitan Area

"ANOTHER OLD-TIMER"

To the Editor:

I recently read with much interest the letter published in your journal from a physician who offered his services to his country early in World War I, and who was criticizing many of the younger men in practice today who prefer to remain at home and carry on "for the duration."

The writer succeeded in getting into the Army and saw considerable service over seas in 1917, and regrets the fact that the Government will not listen to his request for service of some type in the present war which will far overshadow any previous war in the history of the world. Frequently I tell my younger friends who have built fine homes and feel that they must remain on the job to make the payments, or who have so much life insurance that their compensation as a medical officer would not take care of the annual premiums, that their homes, insurance and other earthly possessions will be worth nothing if we fail to win this war, and that it behooves all of us to dig in and do everything possible to whip the Hitler-Mussolini-"Hiro" combination.

With our army now larger than the maximum force during the first world war, it is essential that more medical men get into the service for the health of our fighting men is of utmost importance. Then we older fellows can do something even though not permitted to wear a uniform. There are undoubtedly many places where younger physicians can be replaced by older men and carry on until the war is over. Even though many of us older men have not done obstetrical work, cared for babies, and many of the things seen in a general practice, we can dust off our volumes on obstetrics, pediatrics and other similar subjects; we can attend more medical meetings, take more short refresher courses, and be able to carry on in this emergency.

From present indications, whether they like it or not, most of the physically fit younger physicians are going to be in service within a few months. The sooner they become reconciled to this fact and endeavor to make their plans accordingly, the better off they and their country will be.

Perhaps we older men can serve our country to some extent by telling the younger men what we did in the last war, that we too had problems, families to leave behind, practices which had been built up by hard work, and even our homes were in jeopardy, yet we got in, and have been eternally grateful that we heeded that call.

Sincerely,

"Another Old-Timer."

TUBERCULOSIS CONFERENCE ANNOUNCED

The Mississippi Valley Conference on Tuberculosis and the Mississippi Valley Trudeau Society will hold a meeting at the Edgewater Beach Hotel in Chicago on September 16, 17 and 18.

The Conference Program for Wednesday September 16 and Friday September 18 is largely for nurses, social workers and the Seal Sale Organization.

On Thursday, September 17, the Conference meets in joint session with the Mississippi Valley Trudeau Society. The medical program follows:

THURSDAY MORNING PROGRAM—9:30 A. M. to 12:00 Noon

JOINT SESSION WITH TRUDEAU SOCIETY

C. W. Kammeier, Executive Secretary, Iowa Tuberculosis Association, Des Moines, Iowa, Chairman

INDUSTRIAL WORK — Tuberculosis Case-finding in Industry by a Tuberculosis Association — Julius Novak, M. D., Tuberculosis, Institute of Chicago and Cook County, Chicago, Ill.

Surveying Industrial Personnel — Oscar A. Sander, M. D., Milwaukee, Wis.

Problems Encountered in Organizing Case-finding in Industry and Some Possible Solutions — Wm. A. Doppler, Ph. D., Field Director, Adult Health Education, National Tuberculosis Association, New York, N. Y.

THE TUBERCULIN TEST AND TUBERCULOSIS CONTROL — Oscar Lotz, M. D., Executive Secretary, Wisconsin Anti-Tuberculosis Association, Milwaukee, Wis. — L. L. Collins, M. D., Medical Director, LaSalle County Tuberculosis Sanatorium, Ottawa, Ill.

AFTERNOON PROGRAM — 2:00 P. M.

JOINT SESSION

Presiding — Robt. H. Hayes, M. D., Chicago, Ill.

COUNTY ACCREDITATION FOR TUBERCULOSIS CONTROL — J. Arthur Myers, M. D., Minneapolis, Minn.

TUBERCULOSIS CONTROL AND NATIONAL DEFENSE — Herman E. Hilleboe, P. A., Surgeon-in-Charge Tuberculosis Control, State Relation Division, U. S. Public Health Service, Washington, D. C.

INCIDENCE OF TUBERCULOSIS AMONG CIVIL DEFENSE PERSONNEL — Herbert L. Mantz, M. D., Director of Clinics, Tuberculosis Clearing Center, Kansas City Department of Health, Kansas City, Mo.

REINFECTION TUBERCULOSIS IN YOUNGER CHILDREN — James Stygall, M. D., Indianapolis, Ind.

FRIDAY, SEPTEMBER 18, 1942
MISSISSIPPI VALLEY TRUDEAU SOCIETY

MORNING PROGRAM — 9:00 A. M.

Presiding — Myron D. Miller, M. D., Superintendent Franklin County Sanatorium, Columbus, Ohio.

TYPES OF LUNG PATHOLOGY ENCOUNTERED IN AN ARMY CAMP — Morris C. Thomas, M. D., Major, United States Army, Fort Knox, Ky.

RESULTS OF PECTIN-AGAR FEEDING IN GASTRO-INTESTINAL TUBERCULOSIS — Paul D. Crimm, M. D., Boehne Tuberculosis Hospital, Evansville, Ind.

CLINICAL OBSERVATIONS ON RELATIVE HYPOTENSION IN RELATION TO TUBERCULOSIS — James D. Pierce, M. D., Flower Mission, Indianapolis, Ind.

COLORED MOTION PICTURES THROUGH THE BRONCHOSCOPE — Paul H. Holinger, Chicago, Ill.

BRONCHOSPIROMETRY — John D. Steele, M. D., Milwaukee, Wis.

WEST ROOM — Luncheon — 12 P. M. (All Illinois Physicians Invited) Presiding — Fred M. Meixner, M. D., President, Illinois Tuberculosis Association, Meeting for organization of an Illinois Trudeau Society.

AFTERNOON PROGRAM — 2:00 P. M.

Presiding — Sidney A. Slater, M. D., Worthington, Minn.

THE EFFECT OF REDUCED BAROMETRIC PRESSURE ON PNEUMOTHORAX — W. R. Lovelace, M. D., and H. C. Hinshaw, M. D., The Mayo Clinic, Rochester, Minn.

CHEST SURGERY IN WAR — A. L. Lockwood, M. D., Toronto, Canada

EXPERIMENTAL WORK ON RESPONSE TO BLAST — George M. Curtis, M. D., Department of Research Surgery, and James D. King, M. D., former surgeon to the Chinese Army, Columbus, Ohio.

GENERAL DISCUSSION, opened by: — A. C. Ivy, M. D., Professor of Physiology, Northwestern University, Chicago, Ill.

EVENING PROGRAM — 8:00 P. M.

Michigan Room, The X-Ray Conference, Presiding — John H. Skavlem, M. D., Cincinnati, Ohio.

GREETINGS AUXILIARY MEMBERS FROM YOUR PRESIDENT

Vacations are over and our activities are waiting; let us think seriously of our auxiliary work.

With this thought in mind, may I extend to you assurance of most hearty cooperation throughout the coming year. I trust we will keep well informed by reading and studying the aims and objectives of our Auxiliary, read the Auxiliary Bulletin, Illinois Medical Journal, and the American Medical Journal.

Convention Pledge

We pledged our Auxiliary to assist Dr. E. H. Weld, President of the Illinois State Medical Society, and a pledge to cooperate with the sale of Defense Stamps and Bonds. I urge every county to share in these activities. The sale of Bonds and Stamps typifies the good will of all organizations and the people of our Country; we are to help and never fail our men who are risking all they hold dear.

Membership

The increase of membership in our Auxiliary is the responsibility of every member in the Auxiliary. This cooperation will build up our State figures. If we, the members of this Auxiliary, will keep abreast as to the aims and objectives, we will prove that we are the strongest ally to medicine. Why? Because we are alert to the welfare of our doctors and the Auxiliary.

Benevolence Fund

Benevolence work is another objective of the Auxiliary. As members and wives of physicians, this should be one of our first contributions of the year and we ask the wives of all physicians to share in this, our great work. Years pass on, and time with memories is all that is left for those who never said, nay. May we add comfort and joy in the closing of their years.

Extra Activities

Red Cross, First Aid, Nurse's Aid, and Nutrition Programs all come under the national emergency. Do not fail to cooperate at all times. Remember the boys who are in the camps near your county — help to keep them happy; they, who have but one thought, to keep our Flag flying and our Country safe for democracy.

May I announce at this time, all our Officers

and Chairmen have ready the year's plans and will be happy to serve you.

I, too, pledge my promptness.

Sincerely yours,
Hilda B. Wanninger
Mrs. W. J. Wanninger
President,
Woman's Auxiliary to the
Illinois State Medical Society

WOMAN'S AUXILIARY TO THE ILL. STATE MEDICAL SOCIETY

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Chicago, Illinois

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826 E. 61st Street
Chicago, Illinois

Dr. Harold Camp
Monmouth,
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Dr. S. E. Munson
504 E. Monroe Street
Springfield, Illinois

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Princeton, Illinois

Bulletin —
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★ **BUY WAR BONDS** ★

SURGEONS' CONGRESS SCHEDULED FOR CLEVELAND, NOVEMBER 17 TO 20

The 1942 Clinical Congress of the American College of Surgeons, originally scheduled for October at the Stevens Hotel, Chicago, which was taken over August 1 by the United States Army Air Corps, will be held in Cleveland, with headquarters at the Cleveland Public Auditorium, from November 17 to 20, according to an announcement from the College headquarters in Chicago. The twenty-fifth annual Hospital Standardization Conference sponsored by the College will be held simultaneously.

The program of panel discussions, clinical conferences, scientific sessions, hospital meetings, and medical motion picture exhibitions at headquarters, and operative clinics and demonstrations in the local hospitals and Western Reserve University School of Medicine, has been centered around the many medical and surgical problems arising out of the prosecution of an all-out effort to win the war, emphasizing the needs of the rapidly expanding medical services of the Army and the Navy, and consideration of special problems related to the increasing activities for civilian defense.

The program of both meetings will begin with a Joint General Assembly on Tuesday morning, November 17, with addresses by Surgeon General James C. Magee of the Medical Corps, United States Army; Surgeon General Ross T. McIntire of the Medical Corps, United States Navy; Surgeon General Thomas Parran of the United States Public Health Service; Lieutenant Colonel George Baehr, Chief Medical Officer of the United States Office of Civilian Defense; Dr. Frank H. Lahey, Chairman, Directing Board, Procurement and Assignment Service; Dr. Irvin Abell, Chairman of the Board of Regents of the College and Chairman of the Health and Medical Committee of the Federal Security Agency; and Dr. W. Edward Gallie of Toronto, President of the College. The surgeons general and Colonel Baehr will also speak at the Presidential Meeting and Convocation the same evening.

EXAMINATIONS — AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY

The next written examination and review of case histories (Part I) for all candidates will be held in various cities of the United States and Canada on Saturday, February 13, 1943, at 2:00 P. M. Candidates who successfully complete the Part I examination proceed automatically to the Part II examination held later in the year. All applications must be in the office of the Secretary by November 16, 1942.

Effective this year there will be only one general classification of candidates, all now being required to have been out of medical school not less than eight years, having in that time completed an approved one year general rotating interneship and at least three years of approved special formal training, or its equivalent, in the seven years following the interne year. This Board's requirements for interneships and special training are similar to those of the American Medical Association since the Board and the A. M. A. are at present cooperating in a survey of acceptable institutions. All candidates must be full citizens of the United States or Canada before being eligible for admission to examinations.

All candidates will be required to take the Part I examination, which consists of a written examination and the submission of twenty-five (25) case history abstracts, and the Part II examination (oral-clinical and pathology examination). The Part I examination will be arranged so that the candidate may take it at or near his place of residence, while the Part II examination will be held late in May 1943, in that city nearest to the largest group of applicants. Time and place of this latter will be announced later.

For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

BIG CATS IN TEXAS

Noted by C. N. H. in the Greensboro (N. C.) Daily News

El Paso, Tex., July 4.—(AP)—David Martin decided to take a nap, with his 20-month-old son, Wayne, in the driveway of their home. Along came a cat, ran over Martin and fractured three of his ribs, but the child escaped with only some scratches.—J.A.M.A.

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

During the past week I read Professor Carl J. Friedrich's book "The New Belief in the Comman Man," and also Mrs. Roosevelt's article in the June issue of the American Magazine entitled "What are we Fighting for."

I think Professor Carl J. Friedrich's book is well worth reading, if one is at all interested in our present economic, social and political changes. Mrs. Roosevelt's article is ideal and she states that we are fighting for the freedoms as set forth in the Atlantic Charter and adds to that equality of races, and the world economic equality. She states that this world economic equality can be worked out by economist. That is a simple formula but unfortunately none of our living economist have been able to offer a plan for equality in world economics, and not even one of our own domestic economics. Professor Carl J. Friedrich's book is planned to establish the common man and yet the book must have been written for the uncommon man to read, for only one who has given thought and interest to the affairs as outlined, and is conversant with the writers of the past few centuries down to the present time can follow the thought of his book. I draw from his book that it is his contention that we must have a planned economy, and that we can have a bureaucracy and a democracy at the same time. That is, that we can have a planned economy or a state economy and maintain our democratic form of government. It is somewhat like a good steak smothered in onions in which the onions do not entirely destroy the steak. He contends that the common man as an individual is not dependable as far as his judgment and conclusions regarding domestic and world problems are concerned; but he contends that collectively the common mans' judgment will most always be right providing the common man receives truthful information. He discusses propaganda and its abuses at the present time, and one wonders if he thinks it possible to have facts presented to the common man under a bureaucracy or state form of government of some type. While he discusses the evils of propaganda he sets-up in one portion of his book as an example of planned economy and social order the work of the Massachusetts Public Health Department and elaborates on what they accomplished as the results of a state plan control. One not familiar with Public Health work might be led to think that this was something entirely new, and not give credit to the commonwealth of Massachusetts for having started the Public Health program many years ago. In other words, it might be false propaganda because only one side of the story is told in his book.

He offers no safe guard by which a bureaucracy will guarantee a truthful presentation of both sides of the question to the common man. He refers to Abraham Lincoln as the best example of the common man. This, of course, seems quite strange because Lincoln was capable, above most men, of thinking individually and being right most of the time. More than that, Lincoln apparently was not swayed by criticism or public opinion and had the courage to fight for the preservation of the union for the principle that he had long expounded as an individual. It is undoubtedly true that Lincoln understood the common man, and the fact that he understood the common man made Lincoln an uncommon man. Lincoln gathered men of ability

around him, regardless of whether they were political friend or foe, a fact which again establishes him as not being in the true sense a common man.

One comes to the final conclusion, that our best students of political science, social science, political economics and reforms of various types are not able to set forth any very definite or concrete plan for the solution of our present problems.

Professor Carl J. Friedrich sees many obstacles that he fears cannot be solved by the Atlantic Charter, although he admits the ideals of the charter and sees many perils to its practical application.

The struggle between civil rights and property rights is not particularly new, however, it is mostly a development since our industrialization. No one questions the sound argument set forth for property rights or for civil rights, although a bureaucracy has a tendency to minimize the importance of property rights and perhaps over emphasizes civil rights. In a democracy both of them should keep their place and their importance without destruction of the basic principle involved in both. Those nations that have disregarded property rights on the plea that they are destructive to civil rights, and have attempted to equalize society through confiscatory taxes or actual seizure have ultimately ended up in a revolution. It would seem dangerous to over look this fact and assume that we can try the same experiment and make it work where it has always failed before. In other words, when the process of a bureaucracy of social state is once started the propaganda to the common man is handed out as it always has been under such a program. It seems dangerous to assume that we can have a bureaucracy or a social state and a democracy at the same time.

R. K. Packard, M.D.
Chairman
Committee on Medical Economics

All evidence indicates that tubercle bacilli live a very short time in rooms well supplied with unfiltered daylight. In the dosages in which they are apt to be spread by trained patients of a well-run institution, they probably do not survive in infectious quantities more than a few hours. In absolute darkness they may live several months. C. Richard Smith, Amer. Rev. of Tuber., March, 1942.

The final stages of a campaign against a disease are always the hardest because enthusiasm wanes when a cause is almost won. If we forget what an ebbing menace was like when it was at the flood, we may neglect the precautions which will keep it from rising once again. Perhaps that is one of the chief services of history — to keep a memory green until a task is done. Grace T. Hallock, Amer. Jour. of Pub. Health, May, 1942.

HOW MUCH?

Poem was written by a Hospital Corpsman who was standing by for inspection by the District Medical Officer
Submitted by Commander U. S. A. out of Seattle

The Captain entered the Dispensary,
Everything was quiet and serene,
Until he asked Smith a question,
"How much is a dose of Morphine?"

Mr. Jacobs was making motions
Chief Ruffin shook his head,
Dr. Landberg was slyly smiling,
But Smith was nearly dead.

An awful silence was in order,
Smith was open for a suggestion,
He finally blurted out "One-Eighth,"
And prayed it answered the question.

The tension eased for a moment,
Their breath again they could get,
But the Captain had only started,
"How much Morphine in a Syrette?"

The group was again excited,
And Smith was a deathly white,
He knew the Captain had him,
He'd fought a losing fight.

Yes, you're right, he missed the question,
He whispered, "Sir, I don't know,"
Smith proved to be a terrible actor,
By playing an awful show.

Again the Dispensary is calm and quiet,
Smith learned one thing, you bet,
How much a dose of Morphine is,
And how much is in a Syrette.

J.A.M.A.

TALES OF THE TIMES

Two recruits were unpacking. One, from the city, examined the other's straight-edged razor with interest.

"Gee," he said, "Don't you cut yourself pretty often with this?"

"Nope," drawled the mountaineer, "I been shavin' nigh onto five years naow, and I hain't cut myself neither time."

Medicine's Role in the War Effort

THE SELECTIVE SERVICE AND ITS MEDICAL PROBLEMS

Major General Lewis B. Hershey

WASHINGTON

I am happy to address your meeting as I wish to express my appreciation to you personally and from National Headquarters of Selective Service to the physicians of this country for your work and help in Selective Service. Those of you who are here represent many men at home who are also serving their country at this time.

I am fortunate in having as advisers various committees and groups in your profession who have helped and advised me in the matter of deferment of medical students, physicians, the procurement of physicians and various problems that arose in Selective Service with regard to medical matters.

There are two or three things I wish to talk to you about: first, the physical examination as now conducted in Selective Service; second, rehabilitation; and, third, I want to say something about the part Selective Service will play in the future in the selection of manpower and assignment of the medical profession.

In October 1940 the Army and Navy Selective Service Committee formulated plans to be used in the mobilization of manpower in the United States. These plans were based on the experience of World War I. The physical examinations of 1917 and 1918 were given by the local boards and the men were then inducted and sent to the Army. The Army exercised its right to reexamine these men after their arrival in camp, and as a result 250,000 were rejected and sent home. This system was obviously one to be avoided. It had resulted in burdening the transportation system with many thousands of miles of unnecessary travel. It had dislocated registrants in their everyday life to take them to camps for a short period of time and then return them to pick up the threads of their life again.

In the planning which took place in the War Department in the years since World War I, it was decided that certain general principles should be observed in induction examination. In the first place, a man should not be inducted into the service until he has passed his final physical examination. Second, this final physical examination should be given as near to his home as possible. The experience of the World War had demonstrated that the dual examination regardless of its other merits resulted in misunderstanding, uncertainty for the registrant, and the general feeling on the part of the public that a wide difference of opinion existed among doctors on the qualifications for a soldier. These principles led the Planning Division of the War Department General Staff to set up a single examination given by the Army.

When the Selective Training and Service Act was passed, the War Department did not feel that it had sufficient doctors to put this plan into effect. The result of this decision was a reversion to the dual examination system, which

Presented in the General Scientific Meetings at the Ninety-Third Annual Session of the American Medical Association, Atlantic City, N. J., June 9, 1942.

had not been satisfactory during the war. Inevitably the results anticipated occurred. Men who were passed by their local board examiner made arrangements to leave civil life and were returned rejected by the army induction boards.

To rectify this situation a preinduction examination was provided by the Army. Under this method men were sent to army examining boards well ahead of their induction date. This resulted in a considerable amount of travel, but it did provide definite information to the man as to his physical qualifications prior to the time it was necessary for him to settle up his civilian business. This system would have been successful, undoubtedly, had it not been for the onset of war. War brought a change in conditions, an intensification of recruiting by the Army and the Navy. Men who had been physically examined, who knew that they were qualified for military service, became the prize pool from which recruiters drew their men. It was impossible to make any accurate estimate of how many men would be available for induction two weeks after the completion of a successful physical examination. The War Department felt that in self protection it must induct a man immediately after he was physically examined. To overcome the objection that men would be uncertain in the settling up of their business, the War Department undertook to provide emergency furloughs for those who needed additional time. This plan was not satisfactory, and ultimately the War Department decided to give furloughs to all men after their induction to permit them to close up their civilian activities.

The place of the local board examiner since the initiation of the preinduction examination has been one of uncertainty. The Selective Service System attempted to use the medical examiner of the local board for the purpose of making a screening examination, with particular emphasis on the furnishing of information concerning the emotional and mental stability of the registrant for use of the army induction board. This type of screening examination has not been satisfactory to the medical examiners. The continuing increase in the demand for doctors raises a question as to whether or not the screening examination of the registrant should be continued.

I wish to speak now about physical rehabilitation. By rehabilitation I do not refer to the voluntary kind in which a man seeks the correction of his own defects but to that plan which applies to a rehabilitation program by Selective Service for men who have been rejected by the Army. An attempt was made to publicize and popularize a rehabilitation plan for these men who had been rejected by the Army. The Army did not care to rehabilitate any one because it was too busy doing other things and in addition did not have the available physicians and hospital facilities. Selective Service was assigned the job (by the President) to rehabilitate individuals with minor correctable defects who otherwise were ready for induction.

Last autumn a large representative group from the medical profession and allied interests met in Washington to discuss rehabilitation. It was the unanimous opinion of its members that the assignment was a difficult one and that they did not want to do it but they offered their wholehearted support in the event that Selective Service undertook the task.

Before money could be secured for this plan of physical rehabilitation, war came upon us. Then the situation changed. With the problem of procuring much larger numbers of men for the armed forces, physical standards were lowered. The activities of the local boards were multiplied through increased quotas, additional registration and occupational questionnaires. Medical man hours changed from limited to precious. Twenty per cent of those formerly rejected for service were accepted or were placed in I-B classification instead of IV-F or totally rejected.

The pilot test conducted in Maryland and Virginia received able cooperation from the medical profession. The results obtained to date do not justify a program of physical rehabilitation by Selective Service.

The President has created a War Manpower Commission to coordinate all efforts pertaining to manpower. Rehabilitation is one of the methods by which our manpower may be made more efficient. I shall submit to the War Manpower Commission a report of the experience of the Selective Service System with rehabilitation for its consideration and action.

I stated in outlining this address that I wish to talk to you a moment about doctors. There is a scarcity of medical personnel, an over-all shortage. At present we need all the medical brains we have available. May I observe in passing that Selective Service must recognize a doctor on the basis of the license issued by the state. Two actions must be taken: the maximum professional use must be made immediately of every doctor we have in the services or in civilian practice; the training of additional doctors must be assisted and expedited.

No doctor should be inducted unless he will be used by the armed forces in a professional capacity. The Procurement and Assignment Service will assist the Selective Service with information and advice as to the availability of doctors. This information and all other information available on a registrant doctor will be accumulated and used by the local board in arriving at its decision. On the information so obtained the local board and it alone will decide the classification of the doctor.

Selective Service has protected the medical students. This has extended down into the premedical group. Those students accepted by medical schools for matriculation will be deferred to complete their education, provided they continue to show promise of being acceptable students. The protection of premedical students has been extended under the junior rule, which also applies to chemical, engineering and other technical students. This means that students in their last two years of premedical work who show promise of reaching the ultimate goal will be deferred so as to finish their medical education.

It has been a privilege and a pleasure to speak to you and to express my appreciation of all that you have done in Selective Service. My association with your profession convinces me that you will meet the needs of both the armed forces and our civilian population. How it will be done, the future alone can answer.

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The Army Quartermaster Corps is field-testing a new type of plastic sole for soldiers' shoes. This vinyl resin material, said to be several times tougher than leather, is flexible, serviceable, washable with soap and water, polishable, and not creaseable or checkable under conditions of ordinary wear.—*Business Week.*

PRESENT STATUS OF PROVISION AND AND SUPPLY OF PHYSICIANS

Frank H. Lahey, Chairman

FOR THE DIRECTING BOARD

Many thousands of medical officers have taken their oaths of office or are now in the process of being commissioned in the Army and Navy. Additional thousands of physicians under 37 years of age have been cleared by the professional and state committees for service in the Army and Navy. In some states, quotas developed by the Procurement and Assignment Service have been filled. However, with the rapid expansion of the armed forces planned during the next six months and with the growth of the military medical services, many additional thousands of medical officers will be required.

Some reduction in the number of medical officers per thousand troops is anticipated because the Army has changed its tables of organization, so that officers in the Medical Administrative Corps will be assigned to administrative positions formerly held by medically trained men.

ENROLMENT

By June 1 a hundred and thirty thousand enrolment forms and questionnaires had been returned by physicians. Although many thousands indicated that a commission in the armed forces was their first choice, relatively few applications for commissions in the medical corps of the several services had been received. This seems to have been due to a misunderstanding; namely, that enrolment with the Procurement and Assignment Service was equivalent to applying for a commission. Furthermore, lack of personnel and equipment delayed entering the data of the questionnaires on punch cards. All the information has now been coded on the punch cards. Obviously, every physician should enroll with the Procurement and Assignment Service. If the physician is enrolled, he will be benefited by receiving proper consideration from his Selective Service board, and the state chairman of the Procurement and Assignment Service will be aided in arriving at a decision as to occupational deferment and in rating a physician or dentist as available or essential.

All physicians who failed to enroll and file questionnaires are now being listed. This will be done with the aid of the National Roster and of the American Medical Association. If you have not yet filled out an enrolment form and questionnaire, you should, for your own benefit if not for proper service to your nation, *fill out the enrolment form and questionnaire at once.* If you do not have a blank form, request one immediately from the National Roster of Scientific and Specialized Personnel, 1006 U Street N.W., Washington, D. C.

THE RECRUITMENT OF PHYSICIANS

On April 18 the President issued an executive order transferring the functions of the Procurement and Assignment Service to the War Manpower Commission in the Office for Emergency Management. Previous to this the Navy established offices of Naval Officer Procurement in all naval districts throughout the United States for the most rapid processing of applications and the procurement of officers.

During the latter half of May, terms of army officers constituting medical officer recruiting boards were sent by the War Department to various states to stimulate and facilitate the recruiting of medical and dental officers for the Army. These boards are authorized to issue commissions to qualified applicants immediately. The weekly number of appointments rose sharply. Since the members of the recruiting boards are getting in contact only with those physicians and dentists who have been "cleared" by the Procurement and Assignment Service, there has been a greatly increased volume of work in this agency. To handle this additional work, the office personnel of the Procurement and Assignment Service was increased, and on July 2 its offices were moved to 1006 U Street, N.W., along with those of other divisions of the War Manpower Commission, including the National Roster of Scientific and Specialized Personnel.

With these increased facilities, proper functioning became possible. By the middle of July letters had been forwarded to fifteen hundred physicians under 37 years of age who had signified their preference to serve with the Army. Each letter contained a postcard addressed to the Surgeon General of the Army and one addressed to the War Manpower Commission, and the physician was asked to sign and forward them, thus indicating his desire to be commissioned. The sending of these letters will be continued. To expedite matters, the recruiting unit in each state is informed by the Office of the Surgeon General of the applicant's willingness to apply for a commission.

The Navy Department is furnished names by the Procurement and Assignment Service of those physicians who signify a preference for the Navy. The Bureau of Medicine and Surgery sends such physicians invitations to enroll in the Medical Corps of the United States Naval Reserve and indicates to them how they may apply according to Navy regulations. Physicians should realize that they still have freedom of choice as to the armed service to which they prefer to apply for commission. It is to be borne in mind that the Selective Service boards alone have the legal authority to draft physicians. These boards have been instructed to give every consideration to the physicians whose numbers have been called.

Thus the Procurement and Assignment Service is now functioning according to the plans originally established by the directing board and by the various committees. Its purpose, however, includes not only the listing and procurement of medical, dental and veterinary personnel for the armed forces but also the procurement and equitable allocation of medical and allied personnel for civilian service in medical schools, hospitals, industry, nonmilitary governmental agencies and civilian communities.

NEEDS OF THE CIVILIAN POPULATION

One of the first steps taken by the directing board of the Procurement and Assignment Service was the establishment of a study of the distriubtion of physicians in each of the states according to age, sex and type of practice, in relation to population. These data were utilized in meeting the needs of the armed forces, due allowance being made for the differences between states. Furthermore, the medical needs of districts in each state were roughly estimated, on the basis of one physician for each 1,500 of population. These figures are employed in determining the number of physicians to be judged "essential" in any given area. The status of individual physicians, not only in private practice, but also in hospitals, medical schools, industry and various governmental institutions, was determined only after the local authorities had been consulted, and the final decision was always left to the state committees or, in the case of dispute, to the corps area committees.

Unfortunate incidents have arisen through the commissioning of men previously declared "available" who have suddenly become "essential" because of the death, disability or enlistment of some other physician. In such cases nothing can be done by the Procurement and Assignment Service if the oath of office has been administered. However, the Navy has revoked the commissions in instances in which the withdrawal of a physician from his community was not obviously to the best interests of the general defense program. Many difficult situations have been created by the volunteering of men listed as "essential." Such a physician is just as important to the war effort as a medical officer; he should not apply for a commission unless he is certain that some one is available to take his place. In fact, in this country, as in England, the armed forces have agrced to refuse a commission to a physician or dentist so designated. The Navy likewise is doing this.

RESERVE OFFICERS

All reserve officers of the Army are now subject to call to active duty, even though they have been declared "essential"; such men were granted permission to resign prior to July 1, 1942. All reserve officers of the Navy, except interns, are placed on active duty within a month after obtaining their commissions.

MEDICAL SERVICES FOR INDUSTRIAL COMMUNITIES

Medical services must be provided for new or rapidly expanding industrial communities. This is essentially a local problem, but, if physicians are not available, men who are physically unfit or too old for military service, and who are willing to be dislocated,

must be assigned to such positions. This is a problem to which the directing board of the Procurement and Assignment Service is now giving special consideration so that suitable recommendations may be sent to the War Manpower Commission.

ADDITIONAL PROBLEMS

1. A suitable pool of physicians, including specialists, must be established from which the armed forces can draw for men with general and special training and for future needs.

2. The headquarters of Procurement and Assignment Service, now well organized and located with the National Roster of Scientific and Specialized Personnel at 1006 U Street, N.W., Washington, D. C., proposes to maintain up to date information concerning each physician, dentist and veterinarian in the United States, his assignment and his availability.

3. Consideration is being given to the utilization of the physicians who have graduated from unapproved medical schools and of citizens of co-belligerent countries, of enemy countries and of enemy occupied countries.

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RELATION OF EMERGENCY MEDICAL SERVICES TO INDUSTRIAL PLANTS

The Office of Civilian Defense, Washington, D. C., in Medical Division memorandum number 14, points out that the primary responsibility for the protection of industrial plants rests on the operators, owners and local and state governments. The War and Navy departments have included in their program the responsibility for recommending protection in certain civilian plants engaged in the production of war material. The War and Navy departments have requested all civilian manufacturing plants having important war contracts to cooperate with the local Emergency Medical Service of the U. S. Office of Civilian Defense.

All industrial plants are expected to provide medical services and first aid equipment within the plant for the care of the injured. The Office of Civilian Defense recommends that each industrial plant, in addition to providing its own medical staff and first aid equipment, should plan in collaboration with the chief of Emergency Medical Services of the locality for (1) services of ambulances and emergency medical field units when needed, (2) available beds at one or more hospitals to which the severe casualties may be transported, (3) the establishment of a casualty station of the Emergency Medical Service within a short distance of the plant and (4) obtaining the services of emergency medical field units if needed to supplement the plant medical service during an emergency.

If a plant is miles from a hospital and there is a possibility that the injured might be obliged to remain at the casualty station for hours before transfer to the hospital, the casualty station should be larger than the average for a given number of employees and be adequately equipped. It must have cots, blankets, water and heating facilities and be equipped at least with the emergency medical supplies outlined in Medical Division bulletin number 2, equipment lists 1 and 2.

To implement these instructions, section V of Medical Division bulletin number 4 is amended to include the following additional duties of the local chief of Emergency Medical Service:

During the period of preparation:

6. Protection of Industrial Plants.

(*a*) Advising all employers concerning adequate emergency medical protection to be afforded within industrial, commercial and service installations, including location of casualty stations and medical supplies where needed.

(*b*) Arranging for direct telephone lines between important installations and control center to facilitate evacuation of casualties and to provide emergency medical service with the minimum of delay.

★ ★

ILLINOIS CIVILIAN BLOOD BANK

At the suggestion of Governor Green the state of Illinois has established a civilian blood bank, and a mobile blood collecting clinic has already collected the quota of donations for Champaign, Kane and Rock Island counties and the city of Peoria and at the time of this report was collecting blood from about sixty volunteers a day in Carbondale. The state health officer, Dr. Roland R. Cross, said that in every community visited by the mobile blood collecting unit the civic organizations, industries, defense councils and hospitals have cooperated. It was expected that the immediate quota of four thousand blood donations would be reached by July 25.

★ ★

NEW DIRECTIVE ON DENTAL SERVICE DURING THE WAR

Administrative Notes from the Dental Service, Office of the Surgeon General

A new War Department Directive was issued on April 25, 1942, defining dental service during the war and rescinding the former directive on "Dental Service During the National Emergency." This new directive was published to authorize replacement of missing teeth for personnel entering the Army with insufficient teeth to masticate the Army ration. The following is the wording of the letter on this point:

"Replacement of missing teeth for military personnel will be made when in the opinion of the dental surgeon it is necessary from a health

or functional standpoint; that is, insufficient natural or artificial teeth to satisfactorily masticate the Army ration. Such replacements will be the standard type of full or partial dentures provided in the Army except that anterior teeth lost in line of duty, may be replaced by fixed bridgework when in the opinion of the dental surgeon it is advisable. This type of replacement is to be kept at a minimum consistent with the best interests of the government and the individual."

This directive also restates the limitation on dental attendance for dependents as follows: "Dental attendance for dependents will be limited to emergency treatment. Such treatment will in no instance interfere with the routine dental treatment of the military personnel."—*Army Dental Bulletin,* 13:193, No. 3, July 1942.

★ ★

COURSE IN PHYSICAL THERAPY

"Columbia University announces that beginning September, 1942, a program of professional studies for the training of Physical Therapy technicians will be offered. This training and instruction will extend over a two-year period and has been organized in compliance with the requirements set down for such programs by the Council on Medical Education and Hospitals of the American Medical Association. The course is being set up in University Extension in close relationship with the College of Physcians and Surgeons of Columbia University, the Nursing Education and Health and Physical Education Departments of Teachers College. The clinical and laboratory instruction will be given at the Vanderbilt Clinic, Neurological Institute, Presbyterian Hospital and New York Orthopedic Dispensary and Hospital.

"Two years or 60 semester hours of college, including courses in Physics and Biology, shall be required, or graduation from an accredited School of Nursing or an accredited School of Pyhsical Education.

★ ★

CONFERENCE ON VENEREAL DISEASE CONTROL NEEDS IN WARTIME

Surgeon General Thomas Parran, Presiding

Venereal disease and America's war effort will be discussed by high-ranking medical officers of the War and the Navy Departments, prominent physicians, health officers and others at a Conference in Hot Springs National Park, Arkansas, October 21-24, 1942. Headquarters will be at the Arlington Hotel.

The Conference will be held under the auspices of the United States Public Health Service in conjunction with the Eighth Annual Meeting of the American Neisserian Medical Society. Surgeon General Thomas Parran will preside. State and local health officers, veneral disease control officers, practicing physicians, and all others engaged in veneral disease control activities are urged to attend.

Subjects for discussion will include venereal disease control measures influencing the war effort, epidemiology of syphilis and gonorrhea — 1942, wartime venereal disease control education, research influencing the wartime venereal disease control program, and technics of venereal disease education.

★ ★

A LABEL FOR LIQUOR BOTTLES

In an article on "The Sale of Alcoholic Beverages," published in *Mental Hygiene* for the month of April, 1942, Drs. Alexander, Moore, and Myerson advocate changes in the present methods of labeling bottles containing intoxicating liquors. They hold that alcoholic liquors are clearly covered by the provisions of the Federal Food, Drugs, and Cosmetic Act, and should be labeled in conformity with such provisions.

The label suggested for a liquor bottle by these authors is as follows:

"DIRECTIONS FOR USE: Use moderately and not on successive days. Eat well while drinking and, if necessary, supplement food by vitamin tablets while drinking. WARNINGS May be habit-forming; not for use by children. If this beverage is indulged in consistently and immoderately, it may cause intoxication (drunkenness), later neuralgia and paralysis (neuritis) and serious mental derangement, such as delirium tremens and other curable and incurable mental diseases, as well as kidney and liver damage."—*Mental Hygiene News.*

ETIOLOGY OF HODGKINS

Seen by S. S. in N. Y. World Telegram

Bogota, N. J., Aug. 8.—A two-year battle against a gland ailment brought on by efforts to diet to qualify for the Navy Air Force ended yesterday in the death of David Wallwork, 23, former Bergen College football star. Mr. Wallwork weighed 225 pounds when he applied for admission to the service and when rejected went on a self-imposed diet that resulted in Hodgkins disease.—*J.A.M.A.*

Original Articles

MACROCYTIC ANEMIA

CECIL JAMES WATSON, M. D.
Professor of Medicine
University of Minnesota Medical School

When invited to address you this evening, it was suggested that I might discuss some topic relating either to the liver or the blood. I have chosen the subject of macrocytic anemia with the thought that it covers common ground in these fields perhaps as well as any subject could.

If we go back for a moment into the earlier history[1] of the liver-blood relationship, we find that Galen, although ignorant of the circulation of the blood, nevertheless appreciated the position of the liver between the intestines and the heart, and regarded it as the organ of "sanguification," believing that it converted all of the chyle into blood. Galen, however, was not aware of the existence of the intestinal lymphatics to which Bartholin, centuries later, accorded so much importance that he actually relegated the liver to the minor role of a "large, dull bile-producer," rather than "maximus heroibus" in the Galenical sense. William Harvey's discovery of the circulation and recognition of the importance of the portal circulation prevented any enduring acceptance of Bartholin's view.

The success of liver therapy in pernicious anemia[2] made it clear that the liver was not only the organ of sanguification for much of the aliment, but that it contained substances of the utmost significance for the regulation of normal erythropoiesis. Actually this again is nothing more than a part of the sanguification process. The work of Castle[3] revealed that the liver is simply the storehouse for the antipernicious (AP) substance formed by the interaction of intrinsic factor from the gastric mucosa and extrinsic factor from the food. The liver removes the AP substance from the portal blood and stores whatever excess is unnecessary for the daily regulation of erythropoiesis.

Before Minot and Murphy's report in 1926, the subject of macrocytic anemia was but very poorly understood, and many of these cases were wrongly classified under the heading of pernicious anemia. The older literature contains numerous examples of hemolytic jaundice, aplastic anemia, leukemia, Hodgkin's disease, cirrhosis of the liver and other pathological states in which the anemia was classified as pernicious. The response to liver therapy, particularly as followed by the reticulocyte count[4] has helped in bringing clarity to this problem. Yet the definition of true pernicious (Addisonian) anemia is still not an easy matter. As an example of the difficulty often encountered, the problem of so-called "pernicious anemia" of pregnancy may be cited. In this condition, the morphology of the blood and the bone marrow may be identical with that of pernicious anemia; the response to liver therapy may be excellent, yet achlorhydria may be but temporary or it may not even be present; the atrophic gastritis and permanent achylia of true Addisonian anemia is often lacking. As a rule, the macrocytic anemia of pregnancy is due to a combination of the following factors: 1) Diminished gastric secretory activity including formation of both hydrochloric acid and intrinsic factor. 2) Faulty diet with diminished intake of the extrinsic

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factor. 3) Increased need of AP substance because of fetal requirements[5].

The present day concept of true Addisonian anemia therefore includes the following:

Atrophic gastritis, and achylia (often associated with glossitis)
Constitutional (familial) factor
Resultant lack of intrinsic factor (Castle)
Continued need of and response to liver therapy.

From this it is seen that true pernicious anemia is primarily due to gastric atrophy. The appearance of anemia in these individuals is, of course, often hastened or precipitated by food deficiency due to such factors as loss of teeth, change in economic status, etc.* That is to say, an individual with atrophic gastritis may get along for years with markedly reduced intrinsic factor, as long as his intake of suitable animal protein (extrinsic factor)[4] is good. When this decreases, he is likely to develop pernicious anemia quite rapidly. Thus it is implied that the intrinsic-extrinsic factor relationship obeys the law of mass action, and this appears to be true.

Some macrocytic anemias of pernicious type are purely or principally dietary in origin. This is true of the macrocytic anemia at times seen in pellagra. Moore and co-workers[6] have recently shown that the gastric contents in these patients often contain both intrinsic factor and free HCL, and that the anemia responds to extracts of beef muscle known to be rich in extrinsic factor, also, of course, to liver extract containing the finished AP substance.

Gastric secretory function and diet may both be normal, but if there is faulty absorption of the AP substance, a macrocytic anemia of "pernicious" type is apt to occur. This sequence of events is typified by many cases of sprue, particularly of the tropical variety.

Whatever the source of interference in formation or utilization of the AP substance, the bone marrow becomes more or less megaloblastic. In general, the more severe the anemia, the more diffuse the megaloblastic hyperplasia. Megaloblasts cannot be said to be entirely specific of AP substance deficiency since they are very rarely seen in small numbers in other conditions such as agranulocytosis and leukemia. In a recent case of atypical leukemia studied by the writer, megaloblasts were found in the bone marrow even after intensive liver therapy. In this case, severe anemia of macrocytic type was the outstanding feature, yet there was no response to liver treatment.

Although there are many ways that the macrocytic anemias may be classified, it is very useful both from a diagnostic and therapeutic standpoint to divide them in two groups, those with megaloblastic and those with normoblastic bone marrow (Table I). As a rule the morphologic distinction is not difficult, and the newer methods of sternal aspiration make it easy to obtain bone marrow.

TABLE I

The Various Forms of Macrocytic Anemia

I. With megaloblastic bone marrow
  A. Due to deficieucy of antipernicious substance —
    Intrinsic factor — stomach
    extrinsic factor — food
    1. True pernicious anemia — atrophic gastritis
    2. Carcinoma of stomach* — atrophic gastritis
    3. Food deficency states — extrinsic factor deficiency
    4. Sprue — absorption defect
    5. Fish tapeworm anemia — absorption defect
    6. Carcinoma of intestine — absorption defect
  B. Due to faulty utilization of antipernicious substance
    "Achrestic" anemia of Wilkinson. Lack of GI disturbances. Normal content of AP substance in liver. Poor response to intensive liver therapy.
II. With normoblastic bone marrow.
  A. Macrocytic hemolytic anemia —
    Absence of spheroidocytes
    Normal fragility
    "Cold" agglutinins
    1. Primary or idiopathic (Hayem-Widal).
    2. Secondary to, or associated with:
      Leukemia, Hodgkin's disease, chronic hyperthyroidism, chronic bleeding in an ovarian cyst, chronic arthritis, hepatitis and cirrhosis, uremia, aplastic anemia.
  B. Macrocytic anemia without increased hemolysis, associated with:
    Hepatic disease, pancreatic disease, uremia, and various toxic states (chronic infections and poisons)

*As noted later it is believed that most macrocytic anemias with gastric cancer simply represent associated pernicious anemia.

In general it may be said that liver therapy is specific when the bone marrow is megaloblastic, but of little or no value when normoblastic. An exception in the megaloblastic group

*In this connection it may be noted that there are occasional cases of true Addisonian anemia which are first brought into relapse during pregnancy. In these cases the pregnancy is only the precipitating factor and correspondingly it is these cases which require continued liver therapy after delivery.

is the "achrestic" anemia of Wilkinson and Israels.[7, 8] This is undoubtedly a very rare disease, and its occurrence has even been questioned. I hope that I shall de-emphasize it sufficiently by saying that I have seen but one case that appeared to correspond with Wilkinson's descriptions. The term "achrestic" (from the Greek) was employed by Wilkinson to indicate lack of utilization. As noted in the above table, it appears from the blood and bone marrow of these cases that there is a striking lack of AP substance, yet extracts prepared from their livers were quite active in the treatment of ordinary pernicious anemia[8]. These findings together with the absence of gastrointestinal disturbances and especially of atrophic gastritis, and the slight or absent response to liver therapy induced Wilkinson to designate the anemia as "achrestic." The following case may be an example of achrestic anemia.

♂, 77. Anorexia, weakness, and pallor for one month. Spleen just palpable. *Free HCl present in gastric contents.* Negative x-rays of bones and GI tract. Negative occult blood tests of feces.

Hemoglobin 26%, RBC 1.0 mill. per cu. mm. WBC 3600, neutrophiles 59%, lymph. 38%. Marked macro-anisocytosis and poikilocytosis. MCV 117. MCH 34%. MCD 8.0μ. Bone marrow diffusely megaloblastic. Slight icterus. Van den Bergh indirect. Reticulocytes 1.6% ——→ 12.5% after intramuscular liver extract. Feces urobilinogen 445 — 1066 mg. per day (normally 40 — 280).
Death in spite of intensive liver therapy and transfusions. Permission for necropsy could not be obtained.

The delineation of a primary macrocytic hemolytic anemia,[9, 10, 11, 12] separate from the spheroidocytic anemia with increased fragility of the red blood cells, has met with objection by Dameshek [13] on the ground that the macrocytosis described in these cases is only a pseudo-macrocytosis due to the presence of large numbers of reticulocytes which are, of course, larger than the normal more mature red blood cells. This view, however, does not account for the striking difference in mean cell diameter between the spheroidocytic anemia on the one hand and the macrocytic hemolytic anemia on the other[10]. There are often as many or more reticulocytes in the former disease yet the mean corpuscular diameter is significantly decreased. This may be seen in Table II[10].

TABLE II (see Ref. 10)

	M.C.D.	M.C.V.	Retic. %
Case 1. Familial hemolytic jaundice	7.0	87.0	15.2
Case 2. Familial hemolytic jaundice	6.9	104.0	27.6
Case 3. Familial hemolytic jaundice	7.0	77.0	14.0
Case 4. Reticuloendotheliosis; macrocytic hemolytic anemia	8.25	111.0	4.6-7.0
Case 5. Splenic anemia; probable diffuse splenic fibrosis; macrocytic hemolytic anemia	8.2	119.5	4.5
Case 6. Cirrhosis of the liver; mild macrocytic hemolytic anemia	8.4	100.0	3.6
Case 7. Hemorrhagic ovarian cyst; severe macrocytic hemolytic anemia	8.8	——	15.0

Autohemagglutination due to increased titer of cold agglutinins occurs with relative frequency in the cases of macrocytic hemolytic anemia. It may be so outspoken as to cause an immediate sand-like precipitation of the red blood cells as the blood cools to below 30° C.* This clumping may actually interfere with the red blood cell count, and it is, of course, associated with an extremely rapid sedimentation velocity. If one warms a sample of blood which exhibits this phenomenon, it will be seen that the clumps disappear and the blood again becomes smooth; in other words, the agglutination is reversible. This is not true of the variety of autoagglutination observed in many cases of multiple myeloma. Although the gross appearance is the same, this agglutination is not reversible with heat, and is due not to an increased titer of cold agglutinins but rather to an excessive rouleau formation which in turn depends upon hyperglobulinemia. Recognition and distinction of these two forms of autohemagglutination is at times very helpful in differential diagnosis. Another feature which has been observed in macrocytic hemolytic anemia and not in the cases of familial hemolytic jaundice or anemia, is the hemolytic crisis *after* splenectomy.

*It is very doubtful that "cold" autoagglutination is ever directly responsible for a transfusion reaction. Since they are commonly associated, however, it is not unlikely that an increased titer of "cold" agglutinins is often accompanied by other agglutinins which are active at 37° C.

In two of our cases this nearly resulted fatally, but in both instances the hemolytic activity fortunately stopped after a number of days and the patients then went on to complete recovery. The earlier of these cases was reported previously[10]. The essential features of the latter case are given in the following:

O.H., ♀, 55. Housewife.

12-15-39. Weakness, anemia, mild intermittent jaundice 4 years. Spleen palpable 2 cm. below costal margin. Hemoglobin 44%. Red blood cells 1.74 mill., MCV 135 cu. μ, MCH 49 μgms., MCC 35%, MCD 8.1 μ. Reticulocytes 25%. Icterus index 19. Van den Bergh indirect.

Smear: Predominantly macrocytic. Some microcytes. Price—Jones mean — 7.5, 73% above normal of 7.25.

Fragility: H_1 .42; H_2 .34. Control H_1 .42; H_2 .30. Feces urobilinogen 828 mg. per day (normal 40-280). Urine urobilinogen 4.3 — 10.6 mg (normal: 0.5 — 3.0).

7-17-40* Splenectomy. Spleen weight 420 gm. Moderate diffuse reticular hyperplasia. Postoperative hemolytic crisis.

2-2-40* Hemoglobin 15%, red blood cells 0.9 mill., white blood cells 38,000.

2-13-40* Hemoglobin 21%, red blood cells 0.9 mill., Reticulocytes 42%.

3-7-40* Hemoglobin 53%, red blood cells 2.27 mill., Reticulocytes 25%. Feces urobilinogen 337 mg. per day.

3-29-40 Hemoglobin 62%, red blood cells 2.80 mill., Reticulocytes 2.9%.

10-24-40 Hemogloblin 80%, red blood cells 3.25 mill., Reticulocytes 0.6%. Icterus index 7.0.

1-17-41 Hemoglobin 75%, red blood cells 3.64 mill., Feeling very well.

2-1-42 Hemoglobin 85%, red blood cells 4.15 mill., Feeling very well.

*Numerous transfusions were necessary between these dates.

The red blood cell measurements in the above case are particularly instructive. It will be noted that the mean corpuscular volume and diameter and the mean corpuscular hemoglobin content are all increased. The mean corpuscular concentration of hemoglobin, however, is within the normal limit of 33 to 36 per cent. It has often been customary in the past to speak of hyperchromic anemias. This term simply indicated that the red cells as seen in the stained blood smears appeared to contain more than the normal amount of hemoglobin because they were more darkly staining. Actually this is not because of an increased concentration of hemoglobin, but simply that these large cells are thicker and one is looking through an increased layer of hemoglobin. Hematologists are gradually abandoning use of the term hyperchromic and are simply dividing anemias into normochromic and hypochromic type, depending entirely upon the concentration of hemoglobin in the cell. Since this rarely if ever increases beyond the normal range but commonly decreases, it is at once seen that on the basis of hemoglobin concentration, there are essentially but two types — those that are normochromic and those that are hypochromic. If all anemias are classified on the basis of red cell diameter and hemoglobin concentration, they can be placed in one of six categories, as follows:

TABLE III

Classification of Anemias based on Red Cell Diameters and Hemoglobin Concentrations (MCC)*

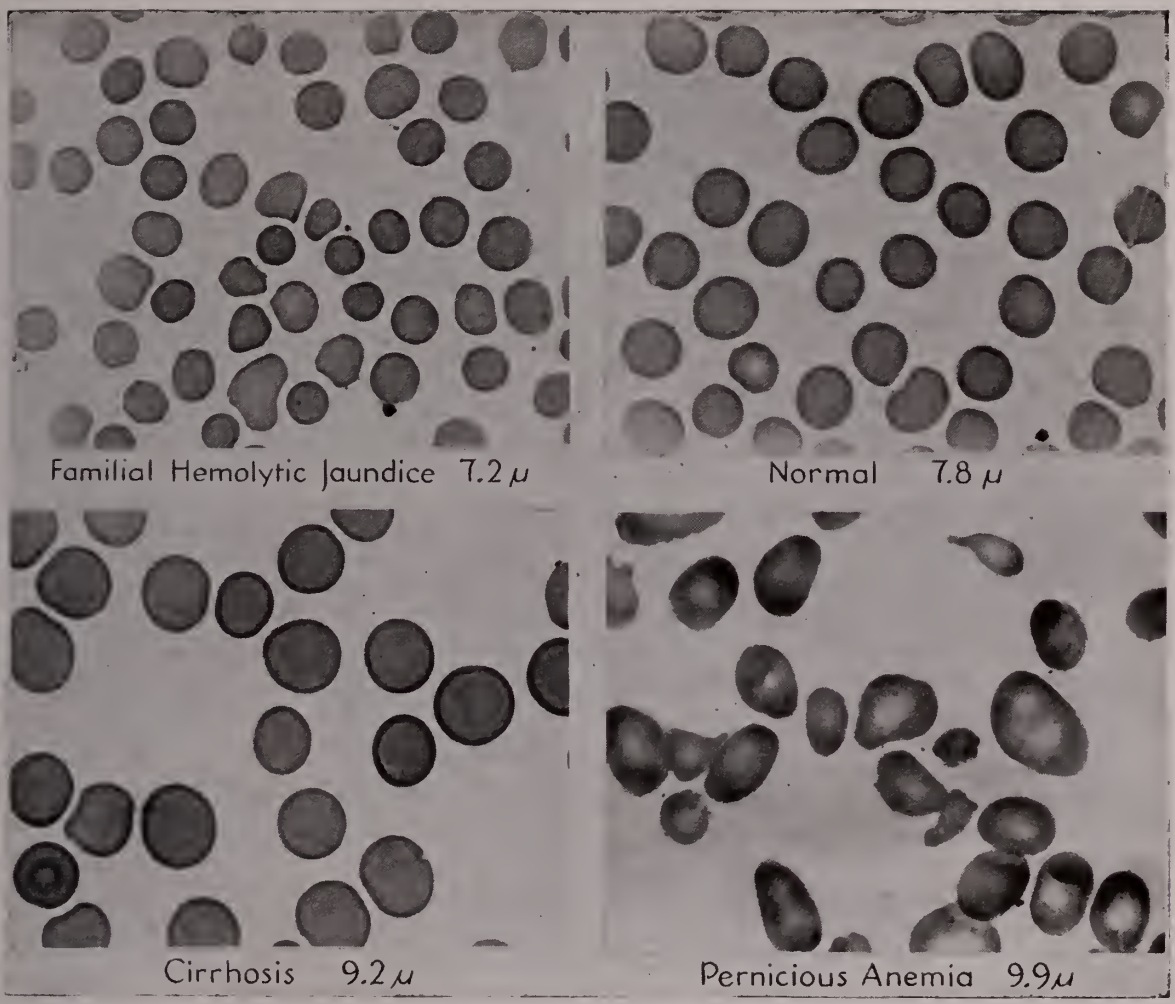
I. Normocytic
- A. Normochromic —
  - Acute blood loss
  - Some aplastic and myelophthisic anemias
- B. Hypochromic —
  - Mild combined deficiency anemias —
    - Fe
    - Extrinsic factor
  - Chronic blood loss anemias
    - Fe

II. Macrocytic
- A. Normochromic —
  - Anemias due to lack of AP substance (megaloblastic bone marrow — pernicious and pernicious types)
  - Hemolytic anemias
  - Macrocytic anemia without increased hemolysis (see table I).
- B. Hypochromic —
  - Combined deficiency — extrinsic factor and Fe
  - Liver disease + Fe deficiency
  - Chronic pancreatitis
  - Certain toxic states (Pb, sulfanilamide, rheumatic fever; macrocytosis may be slight or borderline)
  - Hypothyroidism

III. Microcytic
- A. Normochromic — spheroidocytic hemolytic anemia, usually familial, at times secondary to infections or poisons (sulfanilamide)
- B. Hypochromic — Fe deficiency —
  - Chronic blood loss
  - Achlorhydria
  - Dietary

*The color index may be used instead of the MCC, but is a less accurate determination.

The above classification is of considerable value with respect to therapy. It is seen at once that liver therapy finds its chief usefulness in group II. It will often be moderately helpful in the mild deficiency anemias of group I B, the normocytic hypochromic type. In the other



A comparison of the size and shape of the red blood cells in pernicious anemia, anemia due to cirrhosis of the liver, and familial hemolytic jaundice. x 1100. Mean cell diameter determined with Pijper (Zeiss) halometer. Note the marked difference in piokilocytosis between the macrocytic anemia due to cirrhosis, and the pernicious anemia.

varieties, it is not indicated. Iron therapy need not be employed except where the hemoglobin concentration is below normal; in other words, in the three hypochromic sub-groups. So far as can be determined, iron has little or no value when the anemia is normochromic. If it becomes hypochromic after a period of liver therapy, as is often true in pernicious anemia, then iron should be added. If a given case of anemia has been classified according to this plan, it may then be treated in a rational manner. The use of "shot-gun" preparations containing both liver and iron as well as other supposedly useful substances is held to be undesirable. If the anemia was not classified before treatment with such preparations, then the physician is likely to have much greater difficulty in classifying it later. If a mixed preparation is given to the patient, considerable improvement may very well occur, but it may now be necessary to continue indefinitely with this unscientific and more expensive method of treatment, or else to allow the anemia to relapse so that it may be adequately studied and classified. Where liver therapy is indicated, it should be parenteral, both because its effect given in this way is much more rapid and decisive so that more diagnostic information is gained, and also because it is less expensive and because the patient is obliged to return to

the doctor at intervals for his treatment and is thus kept under observation indefinitely. This is a very important point, especially in the treatment of pernicious anemia. It has been our experience that oral therapy is attended by a much higher percentage of relapses, and by the appearance of many more nervous complications. Further than this, the patient who is being treated for pernicious anemia must be watched carefully for the development of cancer of the stomach, since atrophic gastritis which we have already seen to be the forerunner of pernicious anemia is likewise the type of stomach in which carcinoma is most likely to develop. Together with others[14, 15] we have seen an increasing incidence of carcinoma of the stomach in treated cases of pernicious anemia. Now that the latter individuals are being kept alive by liver therapy, time is permitted for the development of cancer of the stomach. It is felt that this will become more and more clearly recognized as time goes on.

A word should be devoted to the question of treating the macrocytic anemia associated with liver disease, particularly cirrhosis. It was at first believed that this was due to a poor storage or disturbance in formation of the antipernicious substance, because of the liver disease. This has not proven to be the case, and liver therapy in these patients has proven generally disappointing. Furthermore, the cirrhotic liver has been shown to contain an adequate amount of antipernicious substance[16]. There are occasional cases of liver disease, nevertheless, in which the parenteral administration of liver extract is of some benefit to the anemia. In such instances it is not improbable that a deficiency of antipernicious substance has resulted from poor diet (anorexia) or perhaps from a functional depression of gastric secretory activity. In any event, liver therapy should be tried in patients who have liver disease and anemia, but too much should not be expected of it.

The occurrence of macrocytic hemolytic anemia in association with leukemia and Hodgkin's disease has been discussed previously[10], but deserves further emphasis. In some instances the features of hemolytic anemia may dominate the clinical picture. The following case is illustrative:

J. S., ♂, 55. Farmer.

Weakness, pallor, enlarged spleen 1 month.

11-16-38. Hgb. 35%, red blood cells 1.63 mill. per cu. mm., white blood cells 14,300, with 77% lymphocytes, occasionally immature. Mean corpuscular volume 111 cu μ; mean cell diameter (halometer) 8.25 μ; mean corpuscular hemoglobin 33$\mu\mu$g.; Mean corpuscular hemoglobin concentration 30%. Reticulocytes 4.6 — 7.0%. Feces urobilinogen 1315 mg. per day (normally 40 — 280). "Cold" autoagglutination. Multiple transfusions. Reactions. Only slight benefit.

4-19-39. Hgb. 46%. Red blood cells 2.6. Splenectomy. 2200 gm. Definite histologic evidence of lymphatic leukemia. Marked improvement in blood and general symptoms. No transfusions required for 5 months.

5-24-39. Hgb. 59%, RBC 3.3, Feces urobilinogen 180 mg. per day.

8-14-39. Hgb. 49%, RBC 2.1, Feces urobilinogen 156 mg. per day.

9-30-39. Hgb. 38%, RBC 1.2, Feces urobilinogen 1290 mg. per day.

12-20-39. Exitus.

Finally, it may be well to make brief mention of certain aspects of aplastic or "refractory" anemia[17]. Some of these cases are distinctly macrocytic in variety. The following is a typical example of a macrocytic aplastic anemia.

REFRACTORY (APLASTIC) MACROCYTIC ANEMIA

B.B., ♀, 67.

Weakness, fatigue 2 years. Pallor, dyspnea, epistaxis 1 year. Questionable improvement after oral liver and Fe.

1-16-39. Moderate atrophy of tongue. No icterus. Buccal petechiae and + cuff test. Spleen not palpable.
Hgb. 3.2 gms., RBC 800,000. C. I. 1.2. M. C. V. 155.0. M.C.D. 9.0 μ. Reticulocytes 2.6%. Feces urobilinogen 163-639 mg. per day (normally 40-280). WBC 2300, lymph. 85%, Platelets 20,000. Bone marrow: PMN's, plasma cells, histiocytes; almost no immature RBC.

8-27-39. Hgb. 1.9 gms., RBC 600,000. Retic. 0.2%. Transfusion reaction.

9-6-39. Exitus. Necropsy: No red bone marrow in vertebrae, ribs, femur.

The above case illustates several important features that also have been observed in a number of similar instances. It is noted that there is considerable fluctuation in the rate of blood

destruction. Part of the time, urobilinogen excretion in the feces is well above the normal, indicating a considerable hemolytic component at least during these periods. The reticulocyte percentage at the time the patient was first studied was slightly elevated. The bone marrow at this time failed to reveal evidence of any active erythropoiesis. It can only be assumed that the reticulocytes were coming from small active islands in the bone marrow which were not represented in the material obtained by the sternal aspiration. Later on it is noted that the reticulocytes diminish almost to zero level. This decline is in association with progression of the anemia. It is probable that at this time there were no longer any active areas of erythropoiesis in the bone marrow. None were observed at autopsy. In this case and in others of the same type, liver therapy has proven of no value. From the standpoint of immediate diagnosis and prognosis and what to expect from treatment, the presence of marked leukopenia and thrombocytopenia are exceedingly helpful, since they point at once to a general diminution in marrow activity indicative only of aplastic anemia or so-called panmyelophthisis.

SUMMARY

There are many varieties of macrocytic anemia. From a fundamental and therapeutic standpoint they are best separated into those with megaloblastic and those with normoblastic bone marrow. Diffuse megaloblastic hyperplasia indicates deficiency or poor utilization of the antipernicious substance. True Addisonian (pernicious) anemia is the prototype of this group. It is characterized by atrophic gastritis and achylia gastrica whose occurrence probably depend to an important extent on constitutional factors. It is further characterized in the main, by permanent need of and response to liver extract containing antipernicious substance. Other macrocytic anemias due to deficiency of AP substance are on the basis of faulty diet, or faulty absorption. Achrestic anemia is probably due to faulty utilization. An example of this type is cited.

The macrocytic anemias with normoblastic bone marrow include those of hemolytic type, both primary and secondary, and those without increased hemolysis. Various forms are discussed and examples cited.

From a therapeutic standpoint, macrocytic anemias should also be classified as to whether they are normochromic or hypochromic. Iron therapy is indicated in the latter, but not in the former. Liver extract therapy is indicated in both groups if the bone marrow is megaloblastic. Otherwise it is unlikely to be effective. Treatment with mixed preparations is undesirable, especially if it precedes accurate classification of type.

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THE USE OF ANTERIOR PITUITARY EXTRACT IN THE TREATMENT OF ALLERGY

C. S. Bucher, M.D.
CHAMPAIGN

Allergy is as old as medicine; 1500 years ago Galen described asthma. Of more recent time, the terms *hyper-sensitivity, anaphylaxis, allergy,* and *atopic* have been advocated and are commonly used by the profession. Today the trend is toward the use of the term *anaphylaxis* to designate the hypersensitivity produced in research animals, the term *allergy* being reserved for hypersensitivity in the human.

ETIOLOGY

The etiology of allergy may be classified into primary and secondary. Under the heading of primary etiology we consider the individual with all the abnormal structures and functions which may, by mechanical, physiological, or biochemical means, produce a condition whereby the individual responds allergically to the secondary etiological factors.

There are many secondary factors; of these, proteins (contained in plants, animals, and chemicals) are outstanding, physical and chemical agents not infrequent. Proteins are contained in all animals, plants, bacteria, and fungi, nearly all foods, and many chemicals. There are 39 x 10^{25} individual kinds of proteins. If each protein molecule were a two-inch cube, taking one of each kind, there would be sufficient to pave the entire western hemisphere nearly four times. Associate this figure with 1,300,000 people in this country who have major allergy, and the problem of manufacturing allergens, examining, testing, and desensitizing all allergic individuals to these proteins becomes an impossibility. Fortunately, not all proteins are toxic or allergenic to man.

Of the physical agents, cold, heat, and light rays are the most frequent offenders. A large number of drugs and chemicals are among the secondary factors.

The secondary etiological factors have been studied over the greater portion of the world; the length and breadth of our nation, from the earth's surface to great heights, on building tops and by airplane flights over our Great Lakes and territories; in the laboratories, by chemical methods, microscopic and vivisection. Let us remember this good work that has been done while we turn our attention to, and study the individual who has allergy, and not so much to the allergen that has the individual.

PRIMARY ETIOLOGY

Inheritance: The heredity of allergy is transmitted from the parent to the progeny in the chromosomes of the primordial cells, the same as are our statures, features, color of our hair, eyes, skin, etc., that make us look like our ancestors. Besides these, we inherit structures and functions of uncountable cells, tissues, organs, and glands, which determine to a great extent the biological chemistry in which we live and function.

Physiology: In the allergic individual, an abnormal biochemistry is present which is the result of abnormal cell and tissue function, producing further abnormal biochemistry and cell function, causing a vicious cycle with the typical changes of function and structures of allergy and anaphylaxis which are, decrease in rate of blood flow, diminished blood volume, fall of blood pressure, escape of plasma in the tissue spaces, and production of edema, and eosinophilic infiltration.

Steinfield, Ettleson, and Hodes have cited the following action of adrenal cortical hormone: regulation of potassium and sodium balances, increased metabolic rate, regulates cell-plasma ratio. In shock it increases the blood volume and rate of flow and raises the alkali reserve. It also helps the shifting of fluids and electrolytes, restoration of water balance, and utilization of vitamins, increases resistance to infection, and is an important factor in Hypophysogonadal relationship.

The actions of adrenal cortical hormone are physiologically antagonistic to those pathophysiological reactions of allergy. The use of this hormone in the treatment of allergy has met with varied results; indeed, in some cases results have been very good.

About thirty-five years ago, Harvey Cushing observed that the pituitary gland exerted a control over the entire endocrine system. His observations have been corroborated by many investigators. In 1930, Smith observed that

atrophy of the adrenal cortex constantly followed hypophysectomy. He showed that the cortical atrophy could be replaced by anterior pituitary implants or daily injections of saline suspensions of anterior pituitary. Emery and Atwill in 1933 published the results of their research. They found a marked hypertrophy of the adrenal glands following the administration of a preparation of whole sheep pituitary. The mean weight of the adrenals of the injected rats exceeded that of the normal controls (litter mates) by 45.2, 118.3, and 62.6 per cent respectively in three groups.

In 1939, Molmut demonstrated that anaphylactic shock was very much increased in hypophysectomized animals as compared to non-operated controls. The longer the time from operation to administration of the shock material (37 days), the greater were the shock symptoms.

Wasserman, Broh-Kahn, and Mirsky have shown that insulin has antigenic properties. Von Haam and Rosenfeld found that female sex hormones increase the resistance of mice to a virulent strain of type one pneumococcus, and that in rabbits a definite increase in specific and non-specific antibodies followed the administration of large doses of female sex hormone. Bischoff and Lyons, in 1939, stated that mammotropin from beef and sheep pituitaries have antigenic properties and are not species-specific. These and findings of other investigators demonstrate the immunological and antiallergenic properties of anterior pituitary trophins.

In 1941 Goldzieher reported a series of 50 consecutive cases of severe headaches, most of which were of the characteristic migrain type. Clinically the frequency of vasomotor instability and the prevalance of endocrine stigmatization were noted. The treatment consisted of diet, medication, and endocrine therapy, consisting of posterior pituitary extract, diuresis, and salt elimination. He prefers giving the injections properly spaced not more than twice a week, and in conjunction with a potent anterior lobe extract. The author states that treatment should continue for three months. Of the 50 patients treated 40, or 80 per cent, were completely and permanently relieved by the treatment, while 9 showed considerable improvement both as to frequency and severity of headaches. Only one, or 2 per cent, showed little improvement.

Histamine as an etiological agent in allergy and anaphylaxis has recently appeared extensively in the medical literature. That histamine is an activating agent in the production of allergic and anaphylactic reactions, I concede. This, however, does not place the blame where it rightfully belongs. Histamine is a normal biochemical agent; when contained in the cells and tissues in normal amounts, allergic symptoms do not occur from this source. Only where there is an excess do we have allergic reactions from histamine. The presence of excess histamine can be one of two things, either excessive production or insufficient hydrolyzation (breaking down) after its formation. It is formed in the body by cell metabolism, hydrolysis of proteins, and by bacterial action. It is broken down, or rather built up, into human protein by deaminizing enzymes. If either of these physiological processes are abnormal and an excess of histamine is present in the cells and tissues, the fault therefore is one of physiology and not with the agent produced, histamine.

In viewing the subject from the standpoint of the patient who has allergy, we see an abnormal biological chemistry, the result of, and resulting in, abnormal functions of the endocrine system and other chemical factories, abnormal autonomic and somatic nervous systems, neuromuscular, gastrointestinal, cardiovascular, renal, dermal, visual, and psychic systems, resulting in all kinds of allergic manifestations which do not occur in the normal or non-allergic. To bring this out more clearly, in hayfever, proteins of pollens come in contact with the upper respiratory mucosa in the non-allergic and allergic alike; in the allergic chemical reactions take place resulting in irritants to the mucosa and nerve endings. Nature resists in the only way she can, by producing congestion locally, increasing secretions, washing off the pollens, and diluting the remainder. This not being sufficient, impulses are sent to the diaphragm, which snaps, causing a sneeze, blowing the offending material from the surface. What more could a fair-minded individual expect from structures that

are inheritantly allergic? To change this environment and as much as possible the inheritant tendencies, the treatment must of necessity be directed to obtain permanent results. This is accomplished by changing the abnormal functions involved in the production of abnormal biological chemistry to or toward the normal, thus creating a normal environment in which to live and function.

LOGIC OF TREATMENT

The outstanding points that led to the use of anterior pituitary extract in the treatment of allergy was the symptomatic relief experienced by patients who suffered from asthma, hayfever, urticaria, angioneurotic edema, etc., by the proper use of epinephrine, calcium, later enzymes, pancreatic and tissue. We all know that epinephrine will give temporary symptomatic relief to these patients. This led me to believe that in the allergic there is an adrenal deficiency in the production of epinephrine. The results obtained in some of the allergic patients by intravenous or oral administration of large doses of calcium caused me to look for further evidence. Here it was found that one of the functions of the para-thyroids is to ionize calcium, giving the calcium atom an electric charge, thus preparing it for the autonomic and somatic nervous systems. Normally 20 to 27 per cent of the calcium in the body is in the ionic state. If this is kept at a high normal level with a normal intake, there would be no symptoms from this source and no relief by additional administration of calcium.

Proteins, when hydrolyzed, lose their allergenic properties. The hydrolysis of proteins is the result of enzymatic action; thus we look to a method of increasing the enzymes, pancreatic and tissue, histaminase and other intermediary hydrolyzers to hydrolyze histamine and other intermediary biochemical agents that may have allergenic properties.

The anterior pituitary is known to have adrenotrophin, pancreatrophin, parathyrotrophin, gonadotrophin, mamotrophin, and many other trophins. Some of these are clearly associated with the primary etiology of allergy as demonstrated by research and clinical experience. We therefore looked logically to the anterior pituitary for the desired remedy in the treatment of allergy.

METHOD OF TREATMENT

The method we have found to be the most successful is to administer, subcutaneously, anterior pituitary extract equivalent to 18.5 gr. fresh gland once a day for seven to ten days, then three times a week for two or three weeks, or longer, if necessary, until relief is obtained, then twice a week, and later once a week, with variations to fit the individual case. Some patients require much more treatment than do others. The average, for fairly permanent relief of asthma, hayfever, and migrain, and other allergic manifestations, is about 25 injections. In hayfever patients, the treatment should begin preferably two or three months before the anticipated onset of symptoms.

Patients who are sensitive to foods should be put on an elimination diet until symptom free. After a period of 2 weeks or more of freedom from symptoms, a variety of foods can be added gradually. This should not be too rapid, giving time for the structure and chemistry of the body to be transformed from an abnormal toward a normal state. This may take several months.

Patients who have been sufficiently treated with anterior pituitary and have become symptom-free, remain so for a variable time, from a few months to as many years. When symptoms return, a repetition of the treatment is indicated, usually requiring much less of the extract and a shorter period of treatment for clinical results than with the original treatment.

The treatment should be adjusted to the individual as an individual, rather than to a specific disease or symptom of a disease. The treatment of a patient ill with allergy implies more than the obtaining of symptomatic relief by epinephrine, etc.; it implies the process of altering his physiology to adjust his biochemistry and in turn his physiology so that he will no longer react to a major degree in an allergic manner.

Symptomatic Relief: Treatment directed toward obtaining symptomatic relief should be instituted until more permanent results can be obtained with anterior pituitary extract.

Results: In a previous report of a series of 50 cases, 82 per cent received good results (70 to 100 per cent symptomatic relief), 12 per cent fair results (less than 70 per cent relief),

6 per cent received little or no relief. After eleven years of personal experience with 300 cases and reports received from other physicians using the same method of treatment, I find the above figures approximately correct.

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PROBLEMS IN THE TREATMENT OF DIABETES MELLITUS

ARVID T. JOHNSON, M. D.
ROCKFORD

Diabetes mellitus in itself is a disease whose treatment baffles a majority of the general practioners of today. The treatment of this disease requires a knowledge of dietetics and it is only in recent years that this latter subject has entered into the medical curriculum. Even now the average medical student gets only a small smattering of dietetics. For the general practitioner in active practice, medicine draws so heavily upon his time that he is unable to study this subject. Yet, in order to engage in the treatment of even mild uncomplicated cases, a thorough knowledge of the carbohydrate, protein and fat values of food is necessary. In addition, a practical knowledge of the amounts of various foods needed to satisfy the human stomach is also required. To this must be added variation in the diet to suit the patient's likes and dislikes. One of the big reasons for diabetics failing to remain on good management is their dissatisfaction with the types and amounts of the foods they are given. For these reasons one cannot copy diets from books and expect them to apply to the patient even though the caloric values are correct. The patient's attitude toward the diet as well as his physical condition plays a part in the construction of that diet. The diet must please the patient as to amounts, likes and dislikes, and variety or the patient soon fails to adhere to his treatment.

OUTLINE

A. Non-complicated cases.
   1. The average diabetic diet.
   2. The mild diabetic vs. the more severe.
   3. The diabetic child.
   4. The sedentary diabetic.
   5. The heavy laborer.
   6. The underweight individual.
   7. The obese individual.

B. Cases of diabetes complicated by medical diseases.
   1. The common cold and other mild conditions.
   2. Pneumonia and other severe medical conditions necessitating a liquid diet.
   3. The unconscious patient and other patients unable to eat or drink.
   4. The gastro-enteritis patient.
   5. The cardiac patient.
   6. The nephritic patient.
   7. The peptic ulcer patient.

C. Cases of diabetes complicated by surgical conditions.
   1. Infections and surgical conditions not necessitating major surgery.
   2. Fractures, especially those requiring reduction under anesthesia.
   3. Major surgical operations in the diabetic.

A. THE TREATMENT OF THE NON-COMPLICATED CASE OF DIABETES MELLITUS

The average diabetic in good health and doing moderate work requires a diet providing about 35 calories per kilogram body-weight. This diet should also provide from two to three grams of carbohydrate per kilo and about one gram of protein per kilo body-weight. Knowing the various carbohydrate, protein and fat values of foods, the diet is computed accordingly. This takes care of the metabolic requirements of the patient. In order to take care of his likes and dislikes the types and amounts of foods which he

prefers are given to him, within reasonable limits, of course. This diet that is given him according to the rules laid down is, however, only a basic diet. The patient should also be given printed lists of so-called "substitutions." For example, instead of 50 gms. of lean meat, the patient may have 66 gms. of halibut, 58 gms. of beef-liver, 46 gms. of turkey, or 40 gms. of American cheese and so on. A list of such substitutions for meat, bread, vegetables, fruits, milk and cream should be given to every patient. This creates a variety of diet for him and increases his chances of following such a regime.

The patient following this diet may or may not be able to handle this food. If he still has a glycosuria and hyperglycemia, insulin may have to be added. For this purpose, we have regular insulin, crystalline insulin, and protamine-zinc insulin. Because of its slower activity, protamine-zinc insulin may be used in one daily dose given before breakfast. If that dose is over 50 units per day, both regular and protamine-zinc insulin may be required. Regular and crystalline insulin may be given from one to three times daily before meals. If the daily insulin requirement is 25 units or less, one dose before breakfast may suffice. If more than 25 units is required, two and sometimes three doses are necessary. In using two doses daily, the morning dose is roughly twice the amount of the evening dose which is given before dinner in the evening. Reactions before lunch and dinner may make three doses daily necessary. The crystalline insulin is required particularly where there are allergic reactions to the regular insulin which contains more animal protein material than the crystalline insulin. Where large doses of insulin and large amounts of food are necessary, the use of protamine-zinc insulin may be complicated by glycosuria after meals. This can be corrected by the use of regular insulin in the morning or by dividing the diet into four meals, the last meal being given at bedtime. Sufficient insulin, whichever kind is used, should be given so as to produce a sugar-free urine and a normal fasting blood-sugar.

The very mild diabetics may require no insulin at all. As a matter of fact, one-third of those patients who require insulin in the beginning to desugarize may later require no insulin whatever. This is due to the well known fact that the overworked pancreas, being relieved of its overloading, usually develops an increase in activity and causes an increase in the patient's tolerance. In many of the mild cases of diabetes, of course, the condition may be so mild as to not even require a quantitative diet. These can be handled usually with a diet qualitatively low in carbohydrates. These milder diabetics are usually the aged senile individuals who develop diabetes in old age.

It is a maxim that the older the diabetic, the milder the insulin effect. In the senile diabetic, there is a milder response to insulin than there is in the diabetic under 35 years of age. If two diabetics aged 20 and 60 years respectively have a glycosuria of 10 gms. of sugar daily, the younger individual may require ten units of insulin while the older requires 30 units daily to clear up the glycosuria. In other words, a given amount of insulin will handle more sugar in the younger diabetic than it will in the older diabetic. It seems that age brings with it a resistance toward insulin.

In addition to this, the younger individual with his so-called "brittle" diabetes will have more violent insulin reactions than the older person and small over-doses of insulin which might affect the elderly diabetic slightly if at all will produce marked insulin reactions in the young person. The younger diabetic apparently seems more sensitive toward insulin. His diabetic condition also varies correspondingly within wider limits with intercurrent illnesses. This accounts for the fact that the younger diabetic is more prone to develop acidosis and coma than the older diabetic and therefore must be watched more closely during intercurrent illness.

The diabetic child is probably the most difficult diabetic we have to control. Besides the brittleness of his diabetes there is the problem of training the child to resist all the temptations characteristic of childhood. The doses of insulin necessary are usually small. In some instances, one unit of insulin may handle 10 gms. of sugar passed in the urine. For this reason greater caution must be used in increasing the insulin dosage. Increased activity burns sugar more rapidly due to the power of exercising muscles to utilize sugar. As a result insulin reactions are much

more common in these diabetic youngsters. On days when they play hard their insulin dosage should be decreased or their food intake increased to allow for the increased muscular activity. The caloric requirements are also greater in the diabetic child. Children of four years of age or less require approximately 75 calories per kilo body-weight. Children at six years to ten years need 60 to 65 calories and at ten to 17 years, 60 to 45 calories per kilo weight. Inadequate amounts of food to diabetic children or continued poor control result in decreased growth and frequent periods of illness.

Just as children require more calories per kilo body-weight the farmer and other individuals who do heavy labor also require more food. 40 to 45 calories per kilo body-weight are necessary to keep up their body-weight. The sedentary individual, on the other hand, who does little physical or mental work, requires less food, only 25 or 30 callories per kilo. Patients at bed rest need only 25 calories.

Many diabetics come to the physician either overweight or underweight. These must be handled accordingly. The obese individual is given only 15 calories per kilo weight. However, the decrease in calories is made at the expense of the fat and carbohydrate intake chiefly. The protein intake should be maintained at ¾ gm. per kilo weight to prevent loss in muscle substance due to a negative protein balance. The underweight individual going in the opposite direction is given 50 to 60 calories per kilo body-weight. In his diet the protein should be increased in a similar proportion as are the fats and carbohydrates.

A consideration of these problems present in the average uncomplicated cases of diabetes should make it clear that a thorough knowledge of dietetics is absolutely necessary as a basic requirement for treating diabetes. Going from these simpler problems we pass next to those diabetics whose disease is complicated by medical or surgical conditions.

B. DIABETES COMPLICATED BY MEDICAL DISEASES

In the life of every diabetic there arises a variety of medical conditions which compel the attending physician to alter his treatment. As a general rule and especially with infectious diseases, the more severe the illness the greater will be the aggravation of the diabetic condition. Every patient should be taught this fact and warned to examine his urine regularly in the event of a mild intercurrent illness. The finding of increasing amounts of sugar should be reason enough for him to consult his physician. Otherwise acidosis and coma may result.

The common cold is the most frequent condition upsetting a diabetic condition. It usually aggravates a diabetic condition and simply calls for an increased insulin dose to clear up the glycosuria. If the condition develops into a severe upper respiratory infection with loss of appetite and toxemia, further measures must be taken. Fluid intake should be increased and a portion of these fluids should be fruit juices. These may be given as a substitution for the vegetables, meat and potatoes that the patient cannot or will not eat, and their glucose value should be exactly that of the foods which they replace so as not to upset the diabetic balance. The amount of glucose produced by any food (the glucose value) can easily be computed from the fomula:

$$\text{Glucose value} = \frac{100\% \text{ carbohydrate} + 58\% \text{ protein} + 10\% \text{ fat.}}{}$$

Knowing the glucose value of the food which is to be omitted and knowing the glucose value of the fruit juices or milk we can calculate exactly how much fruit juice to give in place of the omitted foods so that the diabetic balance is undisturbed. During such infections the urine should be tested three times daily and regular insulin added as necessary.

In still more severe conditions such as lobar pneumonia the diet will necessarily be replaced completely by fluids such as milk and fruit juices. Here is instituted a form of management which can be termed an "emergency schedule." According to this schedule 30 gms. to 50 gms. of glucose are administered every six hours along with regular insulin every six hours, the dose being dependent upon the urine test for sugar done at the beginning of each six-hour period. The 30 to 50 gms. of glucose can be given in the form of orange juice, milk or glucose solution by vein or hypodermoclysis. 30 gms. of glucose is equivalent to 400 gms. of half milk and cream or 300 gms. of orange juice (or any 10 per cent. fruit juice). 30 gms. of glucose or glucose

equivalent every six hours are required because 120 gms. of glucose daily is necessary in order to burn the fats completely and thus avert the dangers of acidosis and coma. If there is an insufficient amount of glucose burned there is an incomplete breaking down of the fats in metabolism with a resultant production of acetone bodies and a clinical acidosis. The urine should be tested for sugar every six hours and the test reported to the physician who on this basis can direct the amount of insulin to be given at the beginning of each six-hour period. This makes it necessary that the physician be continuously within call of the patient's attendant. Insulin dosage in acute conditions such as pneumonia or other high fevers cannot be determined for 24 hours in advance with any degree of accuracy. Thus it is imperative that the physician be notified of the urine state at least every six hours. Some investigators test the urine as frequently as every three hours and give insulin every three hours.

If the patient is so acutely ill from an acute infectious disease that he cannot drink adequately or, if he is unconscious, intravenous or subcutaneous fluids containing glucose in five to ten per cent. concentration should be used. Thus 1,000 ccm. 5 per cent glucose can be given by continuous intravenous drip every six hours three or four times daily. The insulin may be added directly to the intravenous solution. The urine should be tested every three to six hours and the insulin content of the intravenous solution altered accordingly when the bottles of intravenous solution are changed or renewed. In between these changes when it is inconvenient to add insulin to the intravenous bottles, insulin can be injected by syringe if necessary for increases of sugar occurring in the urine. By this method there is no difficulty in keeping the patient fairly sugar-free. Regular insulin is used throughout of course. If the patient had been maintained on a standard dose of protamine-zinc insulin before his intercurrent illness began, this dose of protamine-zinc insulin may be continued daily and regular insulin given just as described above. In this instance one is simply treating a diabetes which is rendered that much milder or less severe by the protamine-zinc insulin. The continuation of the protamine-zinc insulin administration does not alter the schedule of emergency treatment in any way.

In addition to unconsciousness and severe toxemia of acute infectious diseases, acute gastro-enteritis and pyloric obstruction may compel intravenous treatment by the emergency schedule. Minor degrees of gastro-enteritis and colitis call for the substitution of milk for foods such as vegetables and fruits in terms of their glucose equivalent. Again the urine is tested for sugar and diacetic acid three or four times daily. Acidosis must be watched for especially in diarrheal conditions since food absorption is cut down with resultant decreased glucose metabolism and secondary production of acetone bodies with acidosis and coma.

The peptic ulcer patient occasionally suffers from diabetes mellitus. Here the routine Sippy management of three ounces of milk and cream hourly, modified meals and alkaline powders may be followed. If the diabetes is severe enough to require insulin, the milk and cream and food should be weighed and regular or protamine-zinc insulin administered just as in the average uncomplicated case of diabetes.

The cardiac patient frequently is a diabetic. Here the changes in management are chiefly dietary. In the construction of the cardiac diet the food should be of low volume and of sufficient caloric and protein content. This of course will result in a diet high in carbohydrate with perhaps an increase in insulin. The diabetic patient who suffers from coronary disease or angina pectoris should not be controlled as strictly as the average patient from a sugar-free point of view. A lowered blood-sugar in these individuals may result in anginal or coronary attacks with disastrous consequences. Therefore these patients do better showing slight traces of sugar in the urine. Perhaps all cardiac patients would do better in this respect since a greater supply of sugar is thus available for the heart muscle. The tonic effect of intravenous glucose on the heart muscle is well recognized.

The diabetic patient with nephritis presents problems in management. The acute nephritic requires an increased amount of protein in the diet to compensate for his loss through albuminuria. The chronic nephritic with a normal blood chemistry requires no essential dietary changes. However, the diabetic who has nephritis and suffers nitrogen retention must be placed on a diet low in protein. This is accomplished

by eliminating from the diet such high protein foods as meat, eggs, navy beans, etc. Glycosuria is cleared with regular insulin as a rule in these more severe cases. A diet in the edematous patient may require reduction in fluids such as milk, cream, and fruit juices, leaving the diet more or less of high carbohydrate nature with low protein, low salt, and low fluid intake.

C. DIABETES COMPLICATED BY SURGICAL CONDITIONS

The minor surgical conditions such as infections merely call for increased vigilance with respect to the insulin requirements. Infections of the feet may, if severe enough, aggravate the diabetes and call for an increase in the dosage of regular insulin. If the patient is on protamine-zinc insulin regular insulin is given in addition as necessary before meals. One, two or three doses daily may be necessary depending upon the severity of the diabetic condition. The urine should be tested for sugar before each meal and insulin given as necessary. The same treatment should be followed with the conservative treatment of gangrene where no immediate operation is contemplated and an extended period of bed rest with local treatment to the extremity is required.

Minor surgical operations using local anesthetics usually aggravate the diabetes slightly. The presence of increased amounts of sugar calls for added regular insulin. In all conditions with infection or in which minor surgery is done a sugar-free urine is more conducive toward a favorable outcome. Minor surgical operations should not be done in the presence of acidosis and coma but should be postponed 12 to 24 hours until the acidosis has been eliminated by means of the emergency schedule of treatment as previously described using regular insulin every three to six hours and covering the insulin with intravenous glucose or simple liquid feedings of orange juice or milk. Glycosuria alone does not prevent the performance of minor surgical operations under local anesthetics provided that the means are available for testing the urine and administering insulin three or four times daily so as to clear up the glycosuria within a few hours after operation.

Severe fractures cause an aggravation of diabetes in diabetic individuals. The shock of the fracture plus the shock of reduction under general anesthesia can push a moderately severe diabetic into acidosis and coma rather easily. In such cases the fracture reductions should be postponed until the urine shows only small amounts or less of sugar after emergency schedule treatment. Before reduction under general anesthesia it is well in the insulin patient to give him one-fourth of his daily insulin dose (using regular insulin) before anesthetizing him. All general anesthesias cause glycosuria due to aggravation of the diabetes. Ether aggravates more than does ethylene. After all severe fractures and fracture reductions emergency schedule treatment should be followed.

With major surgical operations on diabetics it is well to hospitalize the patient at least 24 hours in advance of the operation date. During these 24 hours the patient can be rendered sugar-free by means of regular insulin given every four to six hours. The amounts of insulin given should be determined by the physician on the basis of urine tests for sugar done every four to six hours. Most men feel that a patient should be sugar-free preoperatively, although small amounts of sugar need cause no harm. In the presence of large amounts of sugar in the urine, however, the operation, if possible, should be postponed until improvement in the diabetic condition occurs after proper treatment. This should not delay operation for more than 24 to 48 hours. If a diabetic loaded with sugar is operated upon immediately, the anesthetic plus the operative shock may be sufficient to push that patient into acidosis and coma.

Before operation, one-fourth to one-third the daily dose of insulin should be given using regular insulin immediately preoperatively. After operation the emergency schedule should be followed with intravenous 5% glucose by continuous drip, 3,000 ccm. to 4,000 ccm. daily as necessary. The urine should be tested every three hours immediately after operation for the first 24 hours and regular insulin given as necessary in the intravenous solution and supplemented if necessary by additional insulin by hypodermic syringe. As the patient improves and is able to take fluids by mouth, milk and fruit juices are given according to schedule every six hours, i.e., 400 gms. milk or 300 gms. orange juice are given every six hours. Regular insulin is also given every six hours according to the urine test.

When the patient is ready for solid food, a soft diet high in carbohydrate is given in three regular meals with insulin before each meal according to urine tests for sugar. Finally the diet is brought back to normal and the noon-day dose of insulin is combined and given with the morning dose of insulin. If it is desired to use protamine-zinc insulin next the transition is accomplished in the same way as would be done with the ordinary uncomplicated diabetic, i.e., the whole daily dose of insulin as protamine-zinc insulin is given every morning starting on any given day when the patient's condition is suitable. However, on the first day of protamine-zinc insulin, two-thirds the daily dose of regular insulin is given and on the second day one-third the daily dose of regular insulin is given in addition to the whole daily dose of protamine-zinc insulin by separate injections. Thereafter protamine-zinc insulin may be used alone.

Occasionally and more so recently, patients who have been maintained on protamine-zinc insulin require operation. These are best changed over to regular insulin before operation to avoid difficulties unless the physician has had sufficient experience to handle such situations and can switch them to regular insulin postoperatively.

Frequently acute emergency operations such as appendectomies are required in the diabetic. If the patient is in acidosis or has a heavy glycosuria operation should be postponed, if possible, for a few hours until the acidosis and glycosuria are reduced by means of the emergency schedule type of treatment. Regular insulin should be given every two or three hours in as large doses as may be dared in an effort to delay as little as possible the time for operation. This should not delay operation for longer than from four to eighteen hours. The risk of operation, especially in acidosis, is greater than the risk of waiting as a rule. The situation must be carefully weighed and a decision made accordingly but seldom does it occur that the dangers of a few hours delay outweigh the dangers attendant upon operation in the presence of acidosis.

As one can easily understand from the foregoing discussion, moderate or severe diabetes complicated by severe medical or surgical conditions presents a serious time-consuming problem. If the physician intends to care for the diabetes he must be prepared to be always within telephone call for several days. Diabetes under such conditions is not a disease that can be controlled from day to day by daily visits. It requires almost hourly contact and constant vigil for acidosis and coma may strike with lightning-like rapidity as many practitioners know. This constant contact with the patient is often burdensome to the physician but he will be amply rewarded. Under such control he will find that his mortality and morbidity rates will be no greater in the diabetic than in the nondiabetic. Good treatment will eliminate the opinion, that seems widespread, of the diabetic being a poor risk medically and surgically. Reliable statistics show that the average diabetic under good control is as good a risk as the average patient and often better due to the more careful care given to them.

503 City Hall Building

CANCER—A DEFICIENCY DISEASE?

Hugh Macdonald, M. D.
EVANSTON

The infrequency of cancer among native races, living under primitive conditions, has been repeatedly observed. However, when these same natives adopt white men's dietary and mode of life there is a definite increase in the incidence of cancer.

Eskimos — Accurate data as to the causes of death of the Eskimos are not as yet available. Nevertheless, physicians and travelers among the primitive Eskimos have not reported a case of cancer, so, if cancer exists at all, it must be exceedingly rare. Greist[1], for 16 years director of the hospital at Point Barrow, Alaska, and in contact with the Eskimos along a thousand miles of Arctic coast, states that he has not seen a case of external or internal cancer among them. Stefansson[2] reports that he did not know of a case of cancer among the Eskimos living under primitive conditions. Leavitt[3], who visited the western Arctic from 1890 to 1907, and was on a sharp look-out for cancer, never saw a superficial lesion. Inquiries by him about breast cancer revealed that the condition seemed unknown

to the Eskimos of Cape Parry on the east to the mouth of the Yukon on the west, as well as to the Eskimos of northeastern Siberia. Garber[4] reports that cancer and many diseases in the category of the white men's bodily ailments are unknown to the Eskimos living in their primitive way. Bulkley[5], who sojourned about 12 years among many different tribes of Alaskan natives, was unable to discover a true case of carcinoma among the full-bloods and very few among those of mixed blood.

All observers agree that the diet of the Eskimos consists of fish and other sea foods, with some cereals, berries, and vegetables. They consume, raw or cooked, the entire fish or animal, with the possible exception of the eyes. The viscera and the head of the fish are looked upon as especial delicacies.

American Indians — Malignant disease among the North American Indians during the prereservation period appears to have been extremely rare, though the semicivilized or civilized Indians are not free of it. After an extended inquiry among the Indians of southwestern United States and northern Mexico, Hrdlicka[6] remarks that malignant disease must be rare. He heard of "tumors" and saw several cases of fibroid variety but never a clear case of epithelioma or other cancer, nor unequivocal signs of malignant growth on an Indian bone. Hoffman[7] was unable to trace a single authentic case of malignant disease among the Indians of Bolivia. All physicians whom he interviewed on the subject were emphatically of the opinion that cancer of the breast never occurs among these Indians. Similar investigations by him among the Navajo and Zuni Indians of Arizona and New Mexico yielded identical results. He concluded that all studies in the cancer mortality of our Indian population, living under fairly primitive conditions and in little contact with the white population, prove that cancer rarely occurs among them.

The reservation or semicivilized Indians, in contrast to those under prereservation condition, are not free from cancer. The cancer rate among them was in 1921, 17.5 per 100,000; in 1922, 19.2; and in 1923, 22.5. A well-educated, keenly-observant Indian Agency-Superintendent[8], long in the Indian service, states: "Originally the Indians lived mostly on wild game and fish, with corn and dried berries, but of course, as their conditions have changed, their diet has changed with them. Like the white man they now live very largely from tin cans and paper bags. During the first years of my service, the scarcity of cancer among the Indians was a subject of comment. Now cases frequently come to my notice. It is possible that it is due to the change in their living conditions".

The meat diet of the prereservation Indian, like the Eskimo, included all the organs of the animal. The entrails, emptied of their contents, were often eaten raw.

African Negro — The incidence of cancer among primitive African natives is rare also, but increases as they give up their native ways and take on the white men's customs.

In 1906 Hearsey[9] principal medical officer of British Central Africa, reported on the rarity of cancer among the aborigines. He states that there can be little doubt that cancer as a disease affecting natives of British Central Africa is of the utmost rarity. Replies elicited by the doctors who have been in prolonged residence in the country, and in constant touch with the natives have confirmed this statement. Repeated searches by Government Medical Officers throughout the country for some time have so far resulted in the discovery of but two cases, and a third provisionally so diagnosed. No cancer of the breast has been seen or recorded by medical men of the various missions who have been in the closest touch with the natives for many years.

Renner[10], Medical Officer, Freetown, Sierra Leone, reported in 1910 on the spread of cancer among the civilized descendents of the liberated Africans or Creoles. He states that in pursuing the investigation of this subject one would first consider the case of the resident, uncivilized aborigines in the Colony and in the hinterland. From the fact that this disease is rarely seen among the hundreds of female aborigines who are treated regularly every year in the Colonial Hospital, and from the fact that the

medical officers of the protectorate districts, especially those who are stationed in large towns where there are established dispensaries at which the natives have been encouraged to attend for treatment, have in their official returns not shown the presence of new growths among their patients, one can safely assume that cancer as a disease is very rare among the aborigines.

With reference to the Creoles in the Colony proper, an examination of the records of the hospital cases, and those of medical practitioners show that within the last forty years cancer as a disease has been spreading among them.

The existence of cancer among the Creoles and the absense or rarity among the aborigines are due in his opinion to the civilizing influences among the former and to the primitive mode of living among the latter. The Creoles have adopted the European habits, food, and dress for the natural African environment.

The Gold Coast people have been in contact with the European nations for five centuries. Yet after so many centuries of close European contact they have by virtue of their race instinct and unity resisted as one people the inroads of civilization in their social life, and as a result one finds the absence or rather rarity of cancer among them.

Pittsford[11], in commenting on the incidence of cancer among the natives of Natal and Zululand, states that during the four years 1906-9 there were reported eight deaths from cancer among the whole native population (nearly one million), giving a crude death rate of about 0.21 per 100,000 per annum. During the same period the reported average annual death rate from cancer among the Asiatic Indian immigrants was 11.9 and among the Europeans 57.5.

The effect of civilization on the cancer rate of the natives, locally called Bantu, of Natal and Zululand is well shown by the statistics from Johannesburg[12]. The native population of approximately 148,000 consists of men, women, and children whose occupation is either that of a laborer or a household servant. According to the Annual Reports of the Medical Officer of Health of Johannesburg, 19,752 deaths (of which 10% were autopsied) were registered for the Bantu from 1926-1933. Of these 236 (including 73 non-resident) were due to malignant disease. This suggests that in Johannesburg malignancy among the Bantu was 15.7 per 100,000 of population.

Berman[12] states that the incidence of malignancy among the 200,000 South African natives working on the Witwatersrand Gold Mines, where autopsies are frequent and cancer information is fairly precise, was 15 per 100,000 (1925-1933).

These cancer rates among the African Negro may be compared to that of his distant "cousin", the American Negro, who has a much higher standard of living. In 1930 the United States Negro cancer rate was 60.7 per 100,000, varying from a rate of 35.1 in Arkansas to 93.6 in Kentucky.

Prentice[13], discussing the diet of the African aborigines, states that the Negroes, when they can get it, eat far more meat than the white people. There is no limit to the variety or the condition of the meat. They are only vegetarians when no meat can be obtained. Anything from a fieldmouse to an elephant is welcomed. Even the skin of a hippopotamus is cooked when other meat is scarce. Orenstein[14] states that each native employed in the Wirwatersrand Gold Mines eats 196 pounds of meat per year, 16 per cent of which is visceral organs. Natives living in the urban area of Johannesburg likewise eat considerable viscera as it is relatively cheap and the natives have a very low scale of income.

Rural and Urban Diets and Cancer — The lower cancer rate that exists among primitive as compared to civilized natives is likewise shown to a lesser degree in United States among the white population living on the farm as compared to the white city dwellers. During the past 50 years the cancer rate has increased roughly in proportion to the rate of urbanization (table I.) Today the incidence of cancer in the various sections of the United States is in proportion to the degree in which the people are city dwellers (table II).

The average weights of the various portions of beef and pork animals are : 64.5 per cent dressed carcass; 21 per cent offal products (viscera, skin and blood); and 14 per cent loss in

TABLE I.—CANCER RATE AND URBAN POPULATION IN U. S.

Year	Cancer per 100,000	Urban pop. % *
1880 (1)	29	28
1890 (2)	47	36
1900	63	40
1910	76	46
1920	83	52
1930	97	57

* "Growth of Urban Pop. in U. S. A." Bur. of Census.
(1) Whole U. S.
(2) Years 1890 to 1930 refer to Registration Area only.

TABLE II—CANCER RATE AND URBAN POPULATION OF SECTIONS OF U. S. (1930)

Section	Cancer per 100,000	Urban pop. %
New England	131.4	77
Pacific	121.7	67
Middle Atlantic	112.5	77
East No. Central	106.6	66
West No. Central	105.7	41
Mountain	76.9	39
South Atlantic	61.8	36
East So. Central	60.4	28
West So. Central	51.4	36

New Eng.: N.H., Me., Vt., Mass., R.I., Conn.
Pacific: Wash., Ore., Calif.
Middle Atlantic: N. Y., N. J., Pa.
East No. Central: O., Ind., Ill., Mich., Wis.
West No. Central: Minn., Ia., Mo., N. D., S. D., Neb., Kans.
Mountain: Mont., Ida., Wyo., Colo., N. M., Ariz., Utah, Nev.
South Atlantic: Del., Md., Va., W. Va., N. C., S. C., Ga., Fla.
East So. Central: Ky., Tenn., Ala., Miss.
West So. Central: Ark., La., Okla., Tex.

TABLE III—VISCERA-MUSCLE MEAT RATIO AND CANCER RATE

Group	Viscera	Muscle	Cancer per 100,000
Eskimos	1	3	1*
Indians (prereservation)	1	3	1*
African Negroes (primitive)	1	3	1*
African Negroes (Johannesburg)	1	5	15
U. S. Negroes	1	4-49	60
U. S. Cities* (mostly Whites)	1	49	157

*N. Y. City, Chicago, Phil., Los Ang., New Orleans, and St. Louis (1930)
*Estimated

TABLE IV—CANCER RATE ON THE 210TH DAY IN TARRED MICE*

Diet	Cancer %
Liver, dried	92.5
Liver, fat free	83.2
Brain, aq. ext., ph 7.0	79.9
Liver, ether ext.	76.0
Brain, aq. ext., ph 8.4	75.9
Duodenal mucosa	73.5
Liver, aq. ext.	73.5
Pancreas, raw	73.3
Muscle	62.0
Liver, raw	59.5
Whole wheat, vitamins	56.0
Spleen, aq. ext.	55.4
Brain, acetone ext.	51.3
Red bone marrow, ether ext.	47.2
Thymus, raw	46.1
Liver Ext., Eli Lilly & Co.	43.7
Brain, fat free	42.0
Brain, ether ext.	35.0
Red bone marrow	34.3
Lumph nodes, dried	34.1
Brain, acetone, ether ext.	25.0
Brain, raw	22.4
Brain, ether, acetone, calcium precip.	22.2
Gastric mucosa, dried	20.0
Brain, ether, acetone precip.	11.5

*Compiled from the report of Maisin and Pourbaix (15).

moisture. While the offal is thus 25 per cent of all available meat, a large Chicago meat-packing-company reports that the average city butcher shop, dealing mainly with white customers, sells but 2 per cent of offal meat, consisting chiefly of liver, heart, sweet bread, tongue, and brain.

A greater proportion of offal is consumed on the farm because home-butchering is mainly of hogs (and poultry), the skin and most of the viscera of which are still quite popular as food. Table III shows the proportion of the various meats in the diet of the different population groups.

COMMENT

A probable relationship of the meat diet to cancer is suggested by the experimental studies of diet on the tar cancer in mice by Maisin and Pourbaix[15]. Their work was a confirmation of previous observations of Oike[16], Auler[17], Sugiura and Benedict[18], Zeitlin[19], Foulerton[20], Rosenstein and Kohler[21], Tesauro[22], and others.

Maisin and Pourbaix[15] demonstrated clearly that normal organs contain not only cancer growth-promoting factors but cancer growth-inhibiting factors as well, and that through the interaction of these the healthy organism possesses a cancer cell growth regulatory system. Both factors may be present in the same organ and the action of the whole organ is equal to the difference between the two.

In their experiments mice were painted three times a week for a period of about four months, each animal receiving 50 applications of tar. They were previously divided into lots of 30, 50, or 100 animals, each group receiving a given diet.

The basal diet consisted of a small roll (made of water and whole wheat) twice daily with the addition, twice a week, of vitamins. For the special diets the organ or extract was introduced into the rolls, usually three times a week, totaling three to seven grams for the whole organs, or the extract from 14 to 21 grams of organ, per animal per week.

Cancer of the skin appeared in some animals about the 90th day, however, in other animals of the same group it did not appear until later. The comparative results were determined by the percentage of animals in the different groups showing cancer at any given time (210th day). The relative cancer stimulating and inhibiting effect of various organs is shown in table IV. It may be observed that the addition of liver, muscle, pancreas, and duodenal mucosa hastened the appearance of cancer as compared with the diet containing whole wheat and vitamins alone; while the addition of thymus, red bone marrow, lymph nodes, brain, or gastric mucosa delayed the occurrence of cancer. The ether-acetone extract of brain was more inhibiting than whole brain itself, while the aqueous extract of brain greatly accelerated the cancer incidence.

CONCLUSIONS

1. Primitive races eating freely of visceral organs as well as muscle meat, have very little cancer.

2. Civilized white men, limiting their flesh diet practically exclusively to muscle meat, have a high cancer incidence.

3. The cancer rate of primitive races increases as visceral meat is decreased in the diet.

4. Cancer is probably a dietary deficiency disease due to absence of some constituent of certain visceral organs. From the investigations of others it appears that this constituent is most abundant in brain and stomach tissue.

5. Therefore, to prevent cancer, one might conclude that brain or stomach tissue should be added to the diet.

6. The name "Vitamin N" is tentatively suggested for the cancer inhibiting factor.

636 Church St.

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By adding a small quantity of a harmless chemical to water that must be kept in metal storage tanks, all formation of rust and corrosion is prevented; when the water is withdrawn from such tanks, it comes out just as clear as it goes in.

The chemical used for this purpose is commercially available under the trade name Aqua-Clear. In the case of old and rusty tanks, a few treatments will clean out the old rust and the water will flow clear as long as the film deposited on the tank interior by the chemical is maintained.

Use of this clear, tasteless, harmless liquid is advocated for drinking water tanks in boats, in hot-water heating systems to prevent rust and corrosion in the pipes and radiators, and in automobile cooling systems.—*Scientific American.*

TECHNIQUE OF SUGGESTION IN THE THERAPY OF ABNORMAL MENTAL STATES WITH SOME EXPERIMENTAL DATA

D. M. Olkon, A.M., M.D.
CHICAGO

"Suggestion," as Angell says, "has been more or less unintelligently used as far back as we have historical evidence."* Modern psychological research has revived the importance of suggestion and made it an instrument for the use of the medical practitioner. Suggestion, from the therapeutic point of view, may be divided in accordance with Sidis' classification into direct and indirect suggestion. Direct suggestion is illustrated by the demand "Do this!", indirect suggestion by the statement "Other people do this, and achieve very desirable results." The first statement enters the mind as a positive mandate, and although this is an extremely effective method of attack in hypnosis, the normal reaction often proves to be a negative one because of rebellion to command. The second statement enters the individual's consciousness in a more persuasive way that is calculated to arouse ideas which will reinforce it, and so the reaction is reinforced by thought rather than mere obedience to command. This type of suggestion, when skillfully employed, has proved to be of amazing value in overcoming morbid states of mind and body, and in restoring disturbed mental equilibrium to a condition of good vigor and balance.

As suggestion is capable of influencing mental as well as physical behavior, it has developed into a means of influencing the life of the individual. Many misleading theories have been based on a recognition of this fact, so it may be well to say at the outset that suggestion is nothing abnormal or exceptional. There is no form of human behavior into which suggestion does not enter. It may be observed in family life, education, law, business, politics, art, and religion. Every advertisement in the newspaper, every display in the shop windows, every intonation in the voice of a neighbor has its suggestive power; it brings its suggestive content to our minds in such a way that the inclination to do something opposite to the stimulus is weakened. The extreme of suggestion we call hypnotism.

Suggestion may arise in two ways, from without and from within. Suggestion from without always points to an object, suggestion from within, through memory and recall, arouses in the individual some familiar experience. No matter what the source of the suggestion may be, the individual assumes an attitude of expectancy, which, in turn, gives rise to a momentary activity of the mind called attention. It is the swift and uncritical response to the act that has stimulated the attention which we call suggestion.

It should be noted that in effective suggestion, the mind imbibes the stimulus uncritically. It may imbibe the stimulus wholly in case there is a properly directed motor setting.

It is well known that when attention is concentrated and directed to two different stimuli appearing nearly together or simultaneously, not merely the order of appearance, but the size and general form of perception as well is influenced. For example, in the Müller-Lyer illusion figures, Figure I, in which two horizontal lines are of equal length, the converging and diverging end-lines make the horizontal lines appear to be of different lengths.

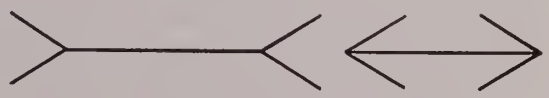


Figure I

Moreover, when our attention takes a certain direction, a condition is set up in which conscious states tend to be augmented or inhibited, according as they are favorable to the continuance of the theme of attention. When we attend expectantly to a coming stimulus, everything is favorable for its reception. If the stimulus be of a visual kind, the eyes are already fixated and accommodated; the whole muscular and nervous system is in readiness to receive the stimulus. It is correspondingly unprepared to receive any other stimulus, and it resists the development of any other presentation. Not only are the appropriate muscles of the sense organs held in preparation, but the sensory cortical

From the Department of Psychiatry of the University of Illinois College of Medicine, and the Psychiatric Division of the Illinois Neuropsychiatric Institute.

*Angell, J. R. Chapters from Modern Psychology, Longmans Green and Co., 1915, p. 179.

centers are attuned, if not excited, because the image or thought of the coming stimulus is held in consciousness.

The chief significance of attention lies in its power to give us more and more of the attended-to material. The mind seeks to get a deeper insight and firmer hold on the object of attention; it aims toward the unfolding and fuller effectiveness of its object. The actions and the suppressing of the opposite actions, the vividness of the impressions and the inhibition of the opposite impressions, all cooperate to make the contents attended to clearer and stronger and more lasting in consciousness.

There is no mystical will influence involved in suggestion. By an easy transition the suggestion of one's follow-beings goes over into an imitation of movements in unfeeling nature. For example, if we fix our attention on the movements of a pendulum, the whole body responds to the swinging movements by faint impulses with which we repeat the motion we perceive. This power of the idea no longer depends upon its own merit or strength or value, but upon the motor setting of the mind and brain.

It is difficult to say how such suggestibility can be explained. We may suppose that somehow the channels of motor discharge become wide open. Yet it is not a mysterious reaction of will on will. We all are more suggestible in states of fatigue or emotional excitement. This simply means that our attention is given to the suggestion as a form of rest or abandonment and accepts uncritically the motor setting.

From a psychological point of view, it must be emphasized that suggestion is, in its last meaning, only a particular form of attention. Accordingly, the physician has not the slightest reason to avoid suggestion. But just because it is a powerful influence, he should use it considerately and wisely. He must never forget that any word spoken by him falls on soil prepared to an unusual degree in the suggestible mind of the sick. He must, therefore, feel conscious of the deep effect which his praise and his blame, his encouragement and his discouragement, must have.

To summarize the concept of suggestion in its sublimated form, we may say that when the motor setting is of such a nature that the individual's attention is heightened to a responsive attitude, either through the perception from without, as in the Müller-Lyer figures, or through a concept from within, as in the individual's recalling similar measures from a past experience, any antagonistic perception or concept is really prevented from entering, is suppressed at once after entrance and is relegated to the marginal consciousness. Any action which the individual begins thus crowds out the impulse to the opposed action, for the motor setting, by which the object of attention finds open channels for discharge in the action, holds back new arousals of negative character. All that suggestion means, then, is action or reaction to a recall which is commensurate with a past experience. That is to say, when one has accepted the suggested motor setting he firmly believes it to be true for the time and he is no longer open to any other form of belief or action; he remains attuned to the stimulus suggested.

In the induction test of year 14 in the Stanford revision of the Binet-Simon test, for example, a paper is folded and a piece is cut out in the middle. The individual is asked to tell how many holes there will be in the paper when it is unfolded. The paper is then unfolded and the individual is asked to count the number of holes, to verify his guess. The paper is first folded only once, then two times, etc. Each time the number of holes doubles. It frequently happens that when an individual makes a wrong guess he persists in making the same reply even when actually counting the number of holes. In the fifth folding, the individual is asked how many holes will there be now? When the reply is twelve and the paper is opened for counting, he may count twelve holes although there are actually sixteen holes there. This suggests that the response is influenced by the expected number, and illustrates the importance of a previous motor setting.

The uses of suggestion are as vast and varied as life itself, but in the treatment of disorganized personality it is perhaps the greatest agent we have when thoughtfully used. When suggestion is used for therapeutic purposes one must use it in as specific a form as one would any pharmaceutic agent. It must assume the form, "do this" or "others have done that," "that is true"

or "that is untrue," "this is possible" or "that is impossible," etc., always in a definite set time. For example, if one wishes to suggest something for immediate effect, the suggestion must assume the form, "do this" for so many seconds or minutes. If the interval is to be longer, here again one must specify the exact number of hours, days, or weeks, as the case may be. Moreover, a motor setting must accompany every suggestion. In the case where time is involved, the motor setting is the writing down on a special colored card the exact time the suggestion calls for, the card being placed in a location where the individual will get to see it often. All these features bring novel perceptions to his attention which repeat to him the suggestion by way of association and recall. Gradually but surely the suggestion becomes dominant and assumes the role of directed attention pointing to the suggestion, where the response to it becomes inevitable; that is, the individual no longer has any other version of the situation, he has succumbed to the suggestion.

When an individual is obsessed by a false belief we should not directly attack his belief, but aim to create by way of suggestion a new belief, which by virtue of its insistance and relation must crowd out the old. A case may be cited; Patient N, believed herself to be going insane. Any reference to insanity, in any shape or form, directly or indirectly, threw her into a state of extreme depression simulating melancholia. Her attention was directed to the fact that insanity manifests itself in motor acts quite different from sane acts, which she herself could discern. The direct suggestion given was that for thirty days she record daily any observations she might make on herself which led her to a growing belief that her acts were unlike those of people whom she thought sane. Her records showed her that her motor behavior did not differ from that of other people in the home, store, church, etc. It also pointed out to her that she talked logically with her acquaintances, did her work efficiently and that she was alive to the world of events. It was forcibly brought to her attention and her own records showed her actions and thoughts to be those of any sane person. She accepted the recording, which was in this instance the motor setting, and hence forth crowded out the obsession of going insane.

Another case may help to illustrate what is meant by "a motor setting" in suggestion. Patient G — a protracted case of vomiting upon taking food accompanied the later months of pregnancy. A week after delivery vomiting again set in on taking food. Repeated examinations of the ejecta and x-ray plates of barium meals reveled no unusual findings to account for the disturbance. In the absence of any organic gastrointestinal clue, it was surmised that the former repeated incident formed a habit which might account for the disturbance and that suggestion ought to be the agent of choice in the treatment.

The suggestion given was that she take two tablespoonsfull of cold water ten minutes before eating and do a specific breathing exercise. She was told to inhale deeply and slowly for ten seconds and to exhale slowly for ten seconds timing herself by a stop-watch held in her hand. This she was to repeat twelve times and the entire twelve times was to take exactly two minutes. The meal was then to be eaten and on completion, she was again to take two tablespoonsfull of cold water and the breathing exercise was to be done again in the same way as before the meal. This was to be followed for three days after each meal, when the vomiting would stop. A cue was given her by which to recognize the improvement. She was told that after the breathing exercise she would feel a warm sensation inside her abdomen. This would indicate to her that no vomiting could take place. On the third day the vomiting stopped.

Here the motor setting was the essential factor. The two tablespoonsful of water, the stop-watch, the breathing exercise, and the warm sensation in the abdomen made the suggestion impressive and kept the attention active. The new perceptions were made focal by these agencies, which kept the suggestion active before the mind for a long enough period to prevent the former habit from expressing itself. The law of the transitoriness of habit doubtless operated here and helped the successful outcome of the suggestion.

To further emphasize that within given limits, response to suggestion is the usual behavior in the presence of the proper motor setting, I am here adding the results of some of many conducted experiments on the effects of suggestion in normal individuals.

Experiment 1: A class of sixty people, made up of high school teachers, grammar grade teachers, social workers, journalists, art students, all of the better informed class generally, were taking their first course in psychology. On this occasion they were asked to give their attention especially to a test of the acuity of visual perception. TEST A. The two Müller-Lyer figures, on a card, were exposed to view three times, ten seconds each, with an interval of twenty seconds between exposures. After the third exposure the class was asked to state as accurately as they could the extent of difference in inches in the length of the two horizontal lines. Seventy-two percent saw unmistakable differences in the length of the lines, varying from one-half to three inches. Twenty-five percent asserted that they could not see the figures well enough to judge, because they were sitting at varying angles from the card.

Other figures of equal size used were the inclined plane figure; two circles in a triangle, one a circle near the apex and the other near the base; two keystones, one underneath and slightly to one side of the other, and the other similar geometrical figures. In each instance the suggestion of inequality of the figures ranging from 80% in the keystones to 64% in the circles.

The success can be attributed to the motor setting: the stop watch, the precise time of exposure and of rest, the introductory discussion of optics with a demonstration of angles of refraction and angles of incidence, a brief allusion to space perception, visual imagery and its psychophysics; all of these preliminary steps prepared them to accept the perception uncritically, and when their attention was highest they readily responded to the simple suggestion, "how much longer in inches in one line than the other?" Their own judgment was inhibited. TEST B. This was to test the acuity of olfactory perception and discrimination. It was explained that what was wanted in this particular instance was a quick response to olfactory perception in actually scenting a new odor. This they were told was not a comparison nor judgment test, but a test for the acuity of the sense of smell. Two colored mixtures, one rose color and the other pale blue were used. The rose colored liquid was water plus a dash of carmine, while the pale blue was water plus a bit of Loeffler's blue. These two liquids were put into glass bottle atomizers, wrapped around with three wrappings. These were now carefully and slowly unwrapped in view of all, mention being made of the volatility of certain aromas, and that quick recognition of odor differences was a sign of high discriminating ability, as well as a mark of keen intellect and perception. The atomizer with the rose colored liquid was now sprayed. Six whiffs were liberated, three on each side of the room which was size 40 x 50 feet with a high ceiling. No sooner was the spray out of the atomizer than hands were being raised throughout the room to signal that the new odor had been sensed. Fifty-eight percent immediately declared they perceived a delightful aromatic odor.

The windows were now thrown open ostensibly to clear the room of any vestige of the former aroma, and the blue colored liquid was then sprayed. It was decidedly interesting to see the hands fly up in the air with such enthusiastic expression, and to hear the exclamations, "what delicate fragrance!" "Such a delicious aroma!" "Such dainty color!" and many such adjectives. Sixty-one percent were entrapped this time.

Experiment 2: This was performed before a County Medical Society. The Müller-Lyer figures netted sixty percent of response to the suggestion; two other geometric figures netted forty-eight and forty-two percent respectively. The olfactory experiment claimed fewer suggestibles the reason being that the room was filled with tobacco smoke; even the sixteen percent that did respond was rather a large percent of response to the suggestion under the existing circumstances and with a trained audience. Here too the motor setting and the novel approach succeeded in wresting the attention of experienced physicians from their usual critical attitude and some of them likewise succumbed to the suggestion.

The contention that suggestions is the uncritical acceptance of a proper motor setting is warranted by the evidence here given.

SUMMARY

Suggestion, when used in a specific form, must have three characteristics to be effective: 1. there must be an appropriate motor setting, relevant to the experience of the individual, both in content and extent; 2. the suggestion

must be directed towards the formation of a new habit; 3. the individual must accept the suggestion uncritically and act upon it, and in this way it can be of marked therapeutic value in the psychoneurosis, in the obsessional states as well as in the phobias.

The limitations of suggestion are set only by the content of the individual's life and by his experience and the suggestion must never over reach the individual's intellectual capacity.

30 North Michigan Avenue

CONCEPTS OF CORONARY DISEASE

J. Bailey Carter, M.D.
Assistant Clinical Professor, Department of Medicine, Rush Medical College of the University of Chicago
Professor, Department of Medicine, Cook County Graduate School of Medicine, Chicago
CHICAGO

During the past decade few problems have been studied more intensively than disease of the coronary arteries. Most of the important developments in electrocardiography have dealt with coronary disease. Correlation of graphic, clinical and necropsy findings have demonstrated the definite value of the method in the study of this group of patients. Recognition of these facts are responsible for the recent widespread interest in electrocardiography.

A physiologic approach to the study of coronary disease has developed.[1–4] Should even a momentary discrepancy between the metabolic supply and demand of the myocardium develop coronary insufficiency is said to exist. The coronary insufficiency may be caused by factors which increase the metabolic requirements of the myocardium or may be due to factors which lead to a decreased coronary bloodflow or to both. This inadequacy may be relative rather than absolute, i.e., a coronary circulation, sufficient under ordinary circumstances, may become relatively insufficient as the result of a sudden increase in the work of the heart.

Exertion, excitement, emotion, food, cold, tobacco, adrenalin, etc., are factors frequently responsible for the increased load on the heart. Rapid or irregular heart action, due to its inefficiency, may initiate coronary failure. Likewise, cardiac hypertrophy may be responsible since there is no associated increase in the number of coronary capillaries and each must supply an area of muscle larger than normal.[5–8] Other factors which increase the work of the heart are obesity, hypertension, hyperthyroidism, infection and valvular disease.

The most common cause for decreased coronary flow is arteriosclerosis. If the process develops slowly and the collateral circulation is adequate little or no coronary insufficiency is manifest despite the coronary obstruction.

An *incipient* coronary insufficiency is recognized. Symptoms and signs may be definite or indefinite. Associated graphic changes may be indefinite or they may constitute the sole evidence of coronary disease.

A *transitory* form of coronary insufficiency occurs when the collateral circulation enables the heart to meet only the ordinary demands but not the increased needs associated with any of the above provocative factors. Here, the coronary flow, ordinarily sufficient, becomes periodically inadequate and cardiac pain commonly develops. This type is usually recognized as *angina pectoris;* rarely, as paroxysmal dyspnea or acute pulmonary edema. Attacks are of abrupt onset and of brief duration. Graphic changes are absent or minor and fleeting.[9] In addition to the above factors, rapid aerial ascension, flight at high altitude, hemorrhage, shock, asphyxia, anoxemia, sudden change in posture, as well as movements, postures, dreams, and vasomotor changes during sleep, may provoke attacks.[4]

Chronic coronary insufficiency may develop; the subjective, objective and graphic evidences of which persist. It may be a later development of an incipient or a supposedly transitory stage of the disease. It may represent a failure of the heart to completely compensate following coronary closure. Likewise, it may be the result of hypertension, diabetes, obesity, or other disease which predisposes to arteriosclerosis. A *benign* type, at any stage of development when first seen, may appear stationary or only slowly progressive when observed over a long period. In this *non-progressive* form, as in benign hypertension, the prognosis is good. The *malignant* form is due either to rapidly progressive cor-

onary disease or to the inadequate development of a compensatory circulation. The *progressive* nature of the process is evidenced by increase in the severity of symptoms and findings on repeated examination and in serial curves. This represents a most serious form of coronary failure. Unless the disease can be checked or the collateral circulation increased heart failure and death are inevitable.[4] Management of the patient and readjustment of his activities must be carefully planned over a long period.

Coronary failure results with further increase in the demands on the heart or under conditions which further reduce its available blood supply. It is characterized by cardiac pain, more prolonged than that of angina, but without clinical, graphic or necropsy evidence of acute myocardial infarction. Since in such instances, after a brief interval, infarction may occur, these patients should be treated conservatively. Coronary failure is usually associated with one of the above precipitating factors which increase the work of the heart or decrease the coronary flow. A *temporary* form may be due to pulmonary embolism, cor pulmonale, pericarditis, dissecting aneurysm, trauma, acute hemorrhage, operation and shock. Other causes are hypertensive crisis, aortic stenosis, heart block, heart failure, acute abdominal conditions, post-operative complications and infections. Predisposing factors are coronary sclerosis, arterial hypertension, aortic stenosis or insufficiency and heart enlargement and failure. Occasionally the cause is obscure. Rarely, an *acute* form occurs without detectable pathologic basis; death usually being due to cardiac standstill or ventricular fibrillation.[10]

When a definite disproportion between the demands on the heart and its blood supply develops and persists prolonged pain occurs, the involved portion of the myocardium becomes necrotic, as evidenced by fever, leukocytosis and increased sedimentation rate, and the electrocardiagram is changed.[2] Although the exact pathologic mechanism of occlusion, i.e., atherosclerosis, subintimal hemorrhage or edema, thrombosis, ulceration or rupture of atheromatous plaques or embolism can not be determined by clinical means, it is recognized that the most common mechanism of complete coronary occlusion is intimal hemorrhage into a sclerotic plaque or hemorrhage into the vessel wall with secondary thrombus formation at the site of intimal injury.[11–21] Occlusion is a better term than thrombosis.[3] It represents a definite clinical and graphic entity. It is firmly established by usage.

Discrepancies between clinical findings and pathologic observations are frequent. The diagnosis of coronary occlusion is often made without such being found. Myocardial infarction may occur without a concomitant fresh occlusion, and contrariwise, occlusion of a major coronary artery may occur without causing acute myocardial infarction. Conversely, fresh infarction or complete occlusion of a main coronary artery may be found without corresponding clinical phenomena. No constant relationship exists between clinical signs, the degree of coronary closure and the occurrence of angina, coronary failure or myocardial infarction.[1, 2, 22–25]

While the coronaries were formerly considered end arteries,[26] it is now generally recognized that fine communications exist between the main coronary branches, even in normal hearts.[2] An anastomatic circulation develops when and where it is needed. Should a coronary artery become narrowed these collateral vessels develop and counteract the diminished bloodflow to that area of the myocardium. Whereas the fine interarterial pathways of the normal heart do not prevent infarction following sudden coronary closure, since here an anastomotic circulation never exists, nevertheless, vessels of larger size, in abnormal hearts, are important factors in obviating the effects of coronary sclerosis and occlusion. With rapid formation of a coronary thrombus, where time for the establishment of an adequate collateral circulation is insufficient, infarction occurs and death may result. Although other communications exist, those between coronary arteries appear to be the more significant in maintaining capillary flow.

The apparent inconsistency of completely occluded or markedly narrowed coronary arteries without clinical signs or significant graphic or pathologic evidence of myocardial damage is explained by the demonstration of an adequate collateral circulation; either as a "by-pass," the collaterals communicating between portions of the same artery proximal and distal to the site of occlusion or the distal portion of the artery may derive its blood supply from distant ves-

sels.[1] Here the process of sclerosis and occlusion progresses so slowly that obstruction to blood flow is compensated by the opening of these collateral channels. Although compatible with comfort and longevity the margin of safety or "coronary reserve" is reduced and with a fresh occlusion, or sudden increase in its load, such a heart may unexpectedly become insufficient. Even with these safeguards, infarction may occur if the time is insufficient for the development of adequate anastomotic vessels. At times the occlusion responsible for myocardial infarction may be found at a distance from the infarct, in a vessel serving as a source for the collateral circulation supplying the infarcted area. This has been termed "infarction at a distance." Finally, the terminal episode of acute myocardial infarction may not be induced by a fresh occlusion but by other factors resulting in increased demands on a heart with an impaired coronary circulation.[27]

Whereas a general relationship exists between the occurrence of coronary sclerosis and the incidence of angina and occlusion other modifying factors, as the site of the occlusion, the vessel involved,[28] the adequacy of the collateral circulation, the rate of development of the occlusion or narrowings, the influence of spasm[29] or reflex changes[30, 31] and the effects of emotion[32] are also important.

The physiologic approach emphasizes the fact that necropsy findings can not determine coronary failure. The effect of increased strain on the heart or of inadequate blood supply may not be manifest at this time. The coronary insufficiency may have been of functional type; the coronary arteries being found normal or even widened rather than narrowed. The status of the sensory nerves and collateral circulation are variables particularly difficult to evaluate in estimating the functional capacity of the heart. However, from a clinical point of view it is important to determine the adequacy of the coronary circulation for the patient's ordinary activities and, should it be insufficient, to obtain rest, to decrease the demands on the heart, to permit sufficient time for the development of a more adequate circulation and for healing if infarction has occurred. The proper diagnosis must be made and the condition, be it angina, coronary failure or occlusion, differentiated from the many other conditions which may simulate it.

The frequent discrepancies in clinical, graphic and necropsy findings are to be expected. Until injection methods for visualization of the coronary system become routine, necropsy observations will remain inadequate.[33]

That premature coronary disease is being neglected has not been sufficiently emphasized. The public should be educated regarding better health habits, mental hygiene and the value of moderate exercise and sufficient rest. The early detection of obesity, hypertension and diabetes, as well as latent coronary disease would aid materially. Significant manifestations of incipient disease of the coronary arteries are undue fatigue, lack of endurance, nervous irritability, palpitation, insomnia, belching, epigastric distress or a feeling of fulness and discomfort after meals. Grossly irregular, intermittent or slow pulse may occur. Shortness of breath on exertion, paroxysmal dyspnea or angina of effort may be recalled. These are evidence of early coronary disease; angina pectoris and coronary occlusion with infarction occur later, while heart failure finally develops as the end result. During this latent period electrocardiography serves as an invaluable check on the clinical examination. It may reveal a large Q_3, flattened S-T intervals and/or T waves, prolonged P-R interval, dropped beats, intraventricular block, bundle-branch block or even a complete heart block. It is a definite aid in establishing the diagnosis of coronary disease at a time when proper management and suitable environmental adjustment may be of greatest benefit to the patient.

Angina pectoris is a transitory attack of substernal pain, of characteristic radiation, caused by some precipitating factor and due to a temporary focal myocardial ischemia but without persistent pathologic myocardial change. The pain may last a few seconds or minutes, rarely more than an hour. It may vary from a vague sensation of substernal pressure to that of an agonizing constriction, or choking sensation. It may radiate to the left or right arm or to the neck. Shock is usually absent. Change in heart sounds, arrhythmias, a drop in blood pressure, and signs of heart failure, are absent. Electrocardiographic changes are absent or transitory. Whereas S-T interval depression may

occur, S-T elevation or T-wave inversion is rarely observed.

Coronary failure may closely resemble occlusion. If it is sufficiently prolonged so that focal myocardial ischemia exists for more than 20 minutes infarction invariably results. Pain is less severe. If prolonged it strongly suggests occlusion. Duration of an attack, however, is not of dependable differential significance. Shock is inconspicuous or absent. Feeble heart tones, fall in blood pressure, gallop rhythm and arrhythmias are less common. Nausea and vomiting are infrequent. Fever, leukocytosis and increased sedimentation rate, as evidence of tissue necrosis, are absent, as are the characteristic progressive electrocardiographic changes associated with infarction. Although S-T interval depression may occur in any or all leads, S-T elevation or T-wave inversion are exceptional. Abnormalities are usually maximal in the initial record and do not progress. They return to normal with disappearance of the precipitating factor. The diagnosis of coronary insufficiency should be made only in the presence of a precipitating factor, when S-T interval depressions only exist and after serial curves have established the absence of the characteristic progressive changes associated with occlusion. Whenever the clinical picture is doubtful the condition should be considered occlusion until proven otherwise. Although angina pectoris and coronary failure simulate coronary occlusion clinically, they are entirely different. Angina and coronary failure have the same physiologic basis in reversible myocardial ischemia of shorter or longer duration. Coronary occlusion, on the other hand, based as it is on irreversible myocardial ischemia, refers to an entirely different pathologic event, i.e., myocardial infarction.

If graphic changes persist coronary occlusion rather than angina or coronary failure must be considered. Whereas the typical picture of coronary occlusion should be readily recognized, painless occlusions and those of atypical onset are frequently overlooked. The pain of occlusion is usually more severe and prolonged than that of angina. Radiation may include the interscapular area, the throat and the epigastrium. The pain is little influenced by activity and may occur during rest or sleep. Nausea with vomiting, rare in angina, is common in occlusion and may be aggravated by morphine. Although no factor immediately responsible for the attack may be apparent, a history of recent effort or excitement is not uncommon. The blood pressure, although it may be temporarily increased during the attack, invariably falls following occlusion. In the presence of arterial hypertension this fall in blood pressure may be delayed. Frequently repeated blood pressure determinations is an important diagnostic aid at the command of every physician. Shock, rare in angina, is common in occlusion. Nitroglycerin should not be used. It lowers blood pressure, it increases the work of the heart, it increases the tendency to shock and is dangerous A cardinal sign of coronary occlusion is feeble heart tones, particularly a distant first tone at the apex; the second sound being louder than the first. The younger the patient the more significant the finding.

A presystolic gallop rhythm due to an accentuated auricular sound is common. It is of considerable diagnostic importance. A pericardial rub may develop but is usually evanescent and is heard in less than ten per cent of cases in routine practice. With adequate care the majority (90%) survive the first attack. Typically, the electrocardiogram reveals progressive changes, consisting of S-T interval elevations which eventuate in T-wave inversions. With anterior apical infarction these changes are present in Leads I and IV; with posterior basal infarction they appear in Leads II and III. The reciprocal relationship of the S-T interval and T waves in Leads I and III is usually evident and may be of assistance in diagnosis. The occurrence and persistence of a deep Q_1 is occasionally of assistance. The return of the electrocardiogram toward normal may begin about the fourth week, to become stationary in three to twelve months; the return to normal being complete in less than ten per cent of patients. Whereas we may emphasize the specificity of the above typical electrocardiographic picture, since its presence indicates occlusion, conversely absence thereof does not eliminate the possibility of such an occurrence. The sudden onset of auricular fibrillation or flutter, ventricular tachycardia or heart block or a low voltage curve, may be the significant early finding. The characteristic progressive changes may be slow in their development or may be obscured by the above arrhythmias; by intraventricular block of bundle-branch type; by the presence of changes commonly associated

with an arterial hypertension or by the presence of abnormalities due to a previous coronary occlusion.

In angina, coronary failure and occlusion, the underlying mechanism seems to be a relative disproportion between the demands of the heart for blood and the supply of blood through the coronary arteries. The resultant myocardial change depends solely on the extent and duration of the ischemia. If of brief duration, as in angina, no permanent myocardial damage results. Even with more prolonged attacks, as in coronary failure, if the increased demands of the heart are quickly reduced, no structural change occurs. With the prolonged ischemia of coronary occlusion irreversible changes give clinical and graphic evidence of tissue destruction, recognized pathologically as myocardial infarction. More frequently than is commonly recognized a severe anginal attack, or an attack of coronary failure cannot be differentiated clinically from coronary occlusion, such differentiation being possible only with the aid of serial electrocardiograms.

SUMMARY

Coronary disease is discussed from a physiologic point of view. Coronary insufficiency may be due to factors which increase the work of the heart or which lead to a decrease in the coronary circulation or both. Exertion, excitement, emotion, food, cold, tobacco, adrenalin, hemorrhage, shock, asphyxia and movements, postures, dreams and vasomotor changes during sleep are most commonly responsible for an increase in the load of the heart. The most common cause for decreased coronary flow is arteriosclerosis. An *incipient* coronary insufficiency is recognized. A *transitory* form is usually recognized as angina pectoris; rarely as paroxysmal dyspnea or acute pulmonary edema. *Chronic* coronary insufficiency of a *benign*, non-progressive type or of a *malignant*, progressive nature may develop. *Coronary failure* results with further increase in the demands on the heart or with further reduction of its available blood supply. A *temporary* form may result from pulmonary embolism, cor pulmonale, pericarditis, dissecting aneurysm, trauma, hypertensive crisis, aortic stenosis, heart block, heart failure, acute abdominal conditions, post-operative complications and infections. Rarely, it is seen in an *acute* form, without detectable pathologic basis; death usually being due to ventricular fibrillation or cardiac standstill. Although angina pectoris and coronary failure have the same physiologic basis in reversible myocardial ischemia of shorter or longer duration, coronary occlusion, on the other hand, based as it is on irreversible myocardial ischemia, refers to an entirely different pathologic event, i.e., myocardial infarction.

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MYCOSIS FUNGOIDES

Report of a case with autopsy findings

S. J. ZAKON, M. D.
Associate in Dermatology,
Northwestern University Medical School
Associate in Dermatology,
Mt. Sinai Hospital
AND
A. P. FALKENSTEIN, M. D.
Resident in Pathology,
Mt. Sinai Hospital
CHICAGO

The status of mycosis fungoides as a clinical and pathological entity has been questioned in recent years. A number of authors are of the opinion that there is a close relationship between the various lymphoblastomas and that mycosis fungoides may terminate as a lymphosarcoma, Hodgkin's disease, or as a leukemia.[1] There are also some, who consider mycosis fungoides as clinical and pathological non-existent.[2]

We had recently the opportunity to study a case of mycosis fungoides during a period of seven years. This case came to autopsy and we believe that the histologic findings of the skin, lymph nodes, and viscera are of sufficient interest to warrant their publication.

CASE REPORT

S. G. aged 51, Jewish man, mattress maker, was first seen on June 10, 1933, and was under continued observation and treatment until his death on November 23, 1940. When first seen, the disease was of 18 months' duration. The disease began as a patch of lichenoid, scaly, infiltrated dermatitis on the outer aspect of the right leg. In the course of 18 months and in spite of therapy the entire cutaneous surface of the body became involved. The eruption was intensely pruritic and consisted of a marked edema of the face, hands and feet, keratoderma of the palms and soles, generalized exfoliative dermatitis, marked lichenification of the skin, and of palpable inguinal and epitrochlear adenopathy. The lymph nodes felt hard and their size varied from a hazelnut to that of a walnut. The spleen was not enlarged.

On October 18, 1934, he was admitted to the Mt. Sinai Hospital. During his stay in the hospital, he had a number of attacks of chills and a fever curve that fluctuated from 100 F. to 103 F. simulating the Pel-Ebstein fever curve. Itching was intense and the lesions that appeared were urticarial and nodular, irregular or circinate, edematous and evanescent in nature. They had a tendency to disappear in the course of from 48 to 72 hours. On the scalp and on the dorsa of the feet, numerous erosions and ulcerations were present. These healed without secondary infections. Physical examination did not disclose any pertinent findings except two abscessed teeth. Laboratory examination excluded parasites in the stools. Blood Wassermann and Kahn were negative, blood sugar, urea nitrogen, creatinine, uric acid were within normal limits. Blood cultures were negative, malaria parasites were not found. Numerous blood counts were made during his hospital admission. These invariably showed a high eosinophilia, except during the terminal phase of the disease, when eosinophilia was absent.

The red blood count varied from 4,370,000 and 82 per cent hemoglobin in 1934 to 2,640,000 and 60 per cent hemoglobin in 1940. The red blood count, how-

From the Department of Dermatology (Service of Dr. M. Dorne) and the Department of Pathology (Director Dr. I. Davidsohn), Mt. Sinai Hospital, Chicago, Illinois.

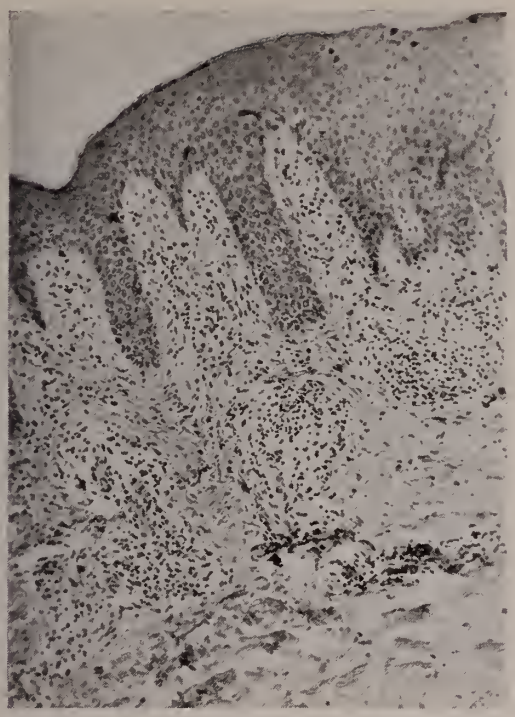


Figure 1. Biopsy of skin, illustrating the premycotic infiltrate in the corium and the marked acanthosis. (x 125).

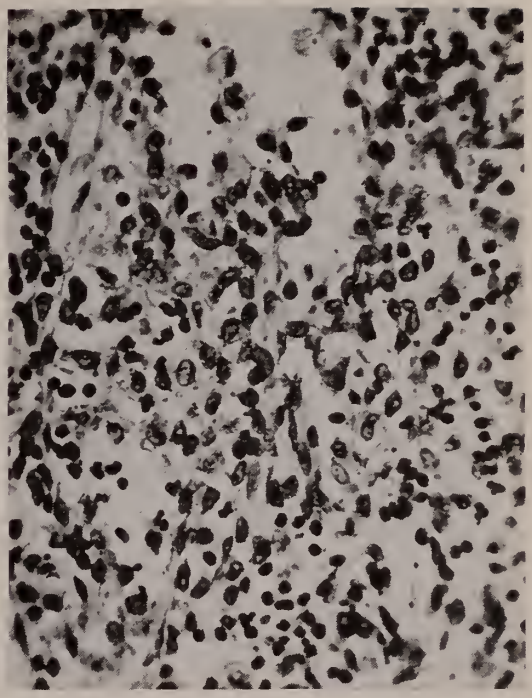


Figure 2. Biopsy of lymph node, illustrating polymorphism of infiltrate and the proliferation of endothelial cells. (x 450).

ever, was always kept up by means of periodic small transfusions (10 in a period of 6 years) and by the administration of iron, arsenic, and a high caloric diet.

At no time in the course of the disease did fungoid lesions appear. This we believe to be due to frequent Roentgen irradiation courses which he received. In October, 1936, he received a course of fever therapy by means of Triple Typhoid Vaccine. This greatly alleviated his itching and from 1936 to 1939 he had a remission during which time he pursued his occupation as a mattress maker.

On October 29, 1934, a piece of skin and an inguinal lymph node were removed for a biopsy. The histologic findings at that time were as follows (Dr. I. Davidsohn):

Skin (Figure 1): Sections show a stratified and hornifying squamous cell epithelium. The corium shows massive accumulations of a great variety of cells among which lymphocytes, neutrophilic and eosinophilic leucocytes are well represented while plasma cells are conspicuous by their absence. The lymphocytes are also in the minority. Many mononuclear endothelial cells are seen, some of them seeming rather irregular in appearance. A small number of dark, large mononuclear cells are present and occasional small multinucleated cells with clumped compact nuclei. The infiltration is limited almost entirely to the corium. Specimen of inguinal lymph node (Figure 2): Section shows in many areas complete destruction of the normal architecture, which is replaced by a variety of cells such as lymphocytes, leucocytes, plasma cells, and a very large number of proliferating endothelial cells. Very few multinucleated cells are seen. They are small in size. Eosinophilic leucocytes are very pronounced, as well as deposits of blood pigment. Lymph follicles are present, though very small in number and in size. The germinal centers are indistinct and exhausted.

Diagnosis: The above findings in the skin and in the lymph nodes are compatible with the diagnosis of mycosis fungoides. Biopsies of skin and lymph nodes taken in 1936 did not show any essential changes from those of 1934.

The patient died November 23, 1940, of a terminal broncho-pneumonia.

Autopsy report: (Autopsy performed by Dr. I. Davidsohn):

The patient was a well developed, poorly nourished, white male, 56 years of age. The skin of the trunk and of the extremities presented a deep brown discoloration, desquamation and marked atrophy. It was dry and in places there were present white areas of depigmentation alternating with darker areas. The scalp was covered in places with black hair. Many hairless areas were present, in which the skin appeared moderately thickened. Eyebrows and eyelashes were sparse. The eyelids showed infiltration. The chin was covered with long bushy black hair, but only in



Figure 3. Skin lesion at the time of autopsy: compact infiltrations of corium. (x 125).

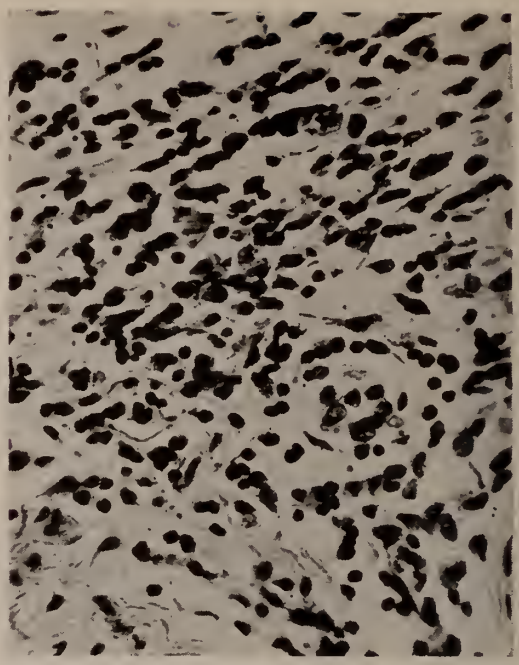


Figure 4. Skin lesion at the time of autopsy, same as Fig. 3, illustrating polymorphous infiltrate, clumping of nuclei and pyknosis. High power magnification (x 450).

spots. The heart showed a thrombo-endocarditis of the tricuspid valve, which was interpreted as a terminal lesion in a marantic patient. In addition it showed brown atrophy, an old healed epicarditis and multiple subepicardial petechiae. The aorta showed slight arteriosclerotic changes. The lungs showed chronic emphysema, chronic purulent bronchitis, bronchiectasis and pneumonic foci in both lower lobes. The spleen was markedly enlarged, weighing 1120 grams. The consistency of the organ was decreased. From the purplish-red section surface a great deal of pulp was scraped off easily. Grossly, no nodes or any evidence of infiltration could be noted. Similarly enlarged was the liver, weighing 2200 grams. Its section surface showed the normal structure replaced by a brown and in places yellowish-brown tissue. The kidneys showed evidence of an acute hemorrhagic glomerulonephritis. The lymph nodes of the axillary and inguinal regions appeared enlarged and presented on section surface reddish-brown and grey and white areas. The brain showed petechial hemorrhages in various regions. All the other organs showed either no abnormalities or only minor changes of no importance for the present discussion.

Bacteriological findings: Non-hemolytic streptococci were found in the heart blood culture obtained at the autopsy and in smears and cultures from the lesions of the tricuspid valve.

Microscopic findings: Sections of different portions of the skin show similar changes with only minor variations (Figures 3 and 4). The subpapillary layer shows dense infiltrations of a polymorphous character with pyknosis and clumping of the nuclei, with occasional multinucleated cells and plasma cells and very few eosinophilic leucocytes. These accumulations are not continuous everywhere. In some places they are absent. The collagen fibers in the papillary and subpapillary layers and within the accumulations are hyalinized and homogeneous. In the deeper layers only very small numbers of cells are seen. In sections taken from the legs hair follicles and sebaceous glands are entirely absent, while the sweat glands are numerous and without abnormalities. These sections also show small granules of a brown pigment most of it in the tissue between the cells. Sections from the thorax show similar infiltrations, but less numerous; however, there is a greater amount of brown pigment, most of it within cells. The skin in the region of the abdomen shows large numbers of plasma cells. Sections from the scalp contain many atrophic hair follicles. In these sections large deposits of a melanotic pigment are seen in the basal layer of the epidermis and within the melanophores in the cutis. The muscles throughout the body show various degrees of atrophy. The lymph nodes (Figure 5) show indistinct lymph follicles and decreased cellularity. The predominant cell is the plasma cell with some eosinophilic leucocytes. In the spleen (Figure 6) the lymph follicles are decreased in number and small in size. The pulp contains large numbers of plasma cells, eosinophilic leucocytes and quite a number of neutrophilic leucocytes. Throughout the sections many foci of dense infiltrations are seen resembling those in the skin and presenting a polymorphous character. Many deposits of blood pigment are seen. The reticulum

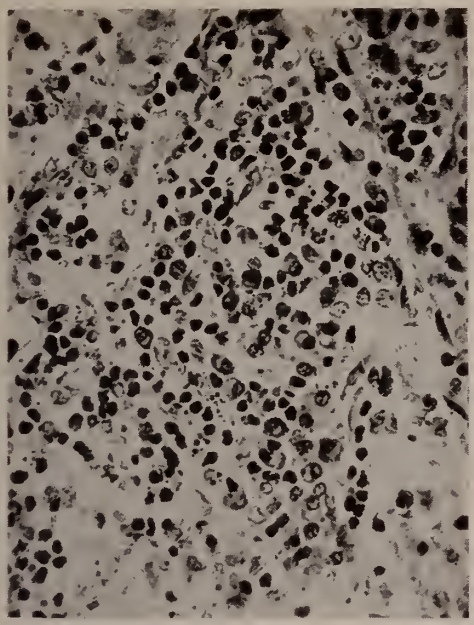


Figure 5. Lymph node at the time of autopsy. Many plasma cells. (x 450).

is moderately thickened. No fibrosis could be encountered anywhere. In the liver (Figure 7) the capillaries are distended with blood. The Kupffer star cells are prominent. A few small accumulations of lymphocytes, plasma cells and occasional large mononuclear or multinucleated cells are seen. There is some atrophy of the liver cells due to chronic passive congestion. The microscopic findings in the kidneys confirm the gross diagnosis of an acute hemorrhagic glomerulonephritis to which the patient finally succumbed.

COMMENT

The following changes are considered to be the outstanding characteristics of mycosis fungoides[3]: a dense cellular, polymorphous infiltrate usually limited to the upper portion of the corium. The cells are of different type; lymphocytes, plasma cells, endothelial cells, and even some multinucleated giant cells may be present. Multinucleated giant cells, however, are very few according to Ormsby[4] and seen more often in early lesions. Montgomery[3] lists in addition to the above findings pyknosis, karyorrhexis and tendency of the nuclei toward clumping. In general, these changes have been found in the sections prepared from the skin. They are present in the sections from the biopsy which were made seven years prior to the patient's death. (Figure 1).

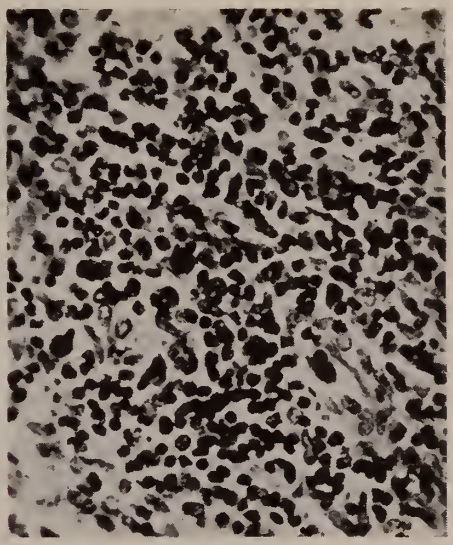


Figure 6. Spleen: polymorphous type of infiltrate, clumping of cells, pyknosis. (x 450).

The sections of the skin examined at the time of the autopsy (Figures 3 and 4) present a similar polymorphous character with nuclear clumping and pyknosis. The infiltrations, however, when compared with those seen in the biopsy, are of much greater compactness. The eosinophilic leucocytes and the clumped multinucleated giant cells are decreased in number.

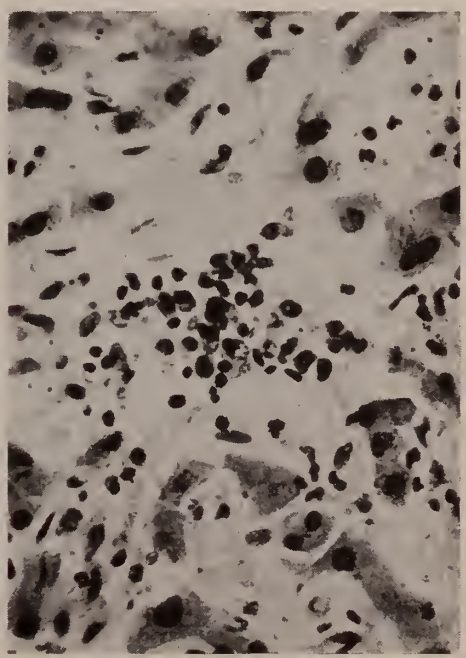


Figure 7. Liver: slight polymorphism of infiltration. (x 450).

This shows that after 7 years of involvement the skin lesions retained their specifity. The inguinal lymph node removed early in the disease presents increased proliferation of the endothelial cells and infiltrations consisting of lymphocytes, leucocytes, plasma cells, and some multinucleated giant cells. These are changes similar to those found in the skin and therefore characteristic of an early specific involvement. The lymph nodes examined at the time of the autopsy present a somewhat different picture. The marked proliferation of the endothelial cells is absent. The cellularity is decreased. Plasma cells are the predominant cells with only occasional eosinophilic leucocytes. This difference is probably due to the long duration of the inflammatory process. The changes in the spleen were similar to those seen in the skin and in the lymph nodes. The liver presented only scanty accumulations of lymphocytes, plasma cells, and occasional large cells with irregularly shaped nuclei. These accumulations though small can be considered as a visceral manifestation.

Which histological features differentiate mycosis fungoides from other diseases of the lymphoblastoma group? Hodgkin's disease, as commonly agreed, is not a disease of the skin, but of the lymphoid tissue. It is characterized by a polymorphous type of infiltrate with Sternberg-Reed cells which are usually present and very characteristic for the disease. They show certain features different from the multinucleated giant cells found in mycosis fungoides. Here the main lesions are seen in the skin, and if the internal organs are involved, the infiltrations are of a striking similarity to the skin lesions. The involvement of internal organs has not been reported frequently. During the discussion of the findings Dr. Davidsohn emphasized the absence of fibrosis and the moderate degree of proliferation of the reticulum in this case. In advance cases of Hodgkin's disease one usually finds a great deal of fibrosis and proliferation of the reticulum. The microscopic findings in lymphosarcoma are of an entirely different nature. There is greater uniformity of the cells which are mostly of the mononuclear type with many mitotic figures. There is no mixed infiltration with different types of cells and multinucleated giant cells are absent. It also is primarily a disease of the lymph nodes, while the skin lesions are secondary. In leukemin cutis one finds either dense infiltrations with lymphocytes or with myeloid cells.

Clinically mycosis fungoides presents a premycotic and a tumor stage. The factor of X-ray and arsenic therapy undoubtedly played a role in the marked melanosis and in the absence of tumor formation. Considering all of the above mentioned opinions and especially the histologic findings, we feel that a diagnosis of mycosis fungoides in this case is justified.

The statement of several authors that mycosis fungoides may in some instances change into another form of a lymphoblastoma cannot be denied by the presentation of a single case. Difficulties in diagnosis seem to be possible in the very early stage, when the cellular infiltrate is still indistinct, especially when giant cells are present. In such instances an exact diagnosis may be arrived at only after prolonged observation and study, both clinical and pathological.

CONCLUSIONS

1. A case of mycosis fungoides observed for a period of seven years presented at autopsy lesions in the skin, lymph nodes, and in some viscera.
2. These lesions were thought to be of specific nature.
3. Mycosis fungoides in the prefungoid and tumor stages can usually be diagnosed by its cellular structure.
4. We agree with Ormsby that the preponderance of clinical and histologic evidence is in favor of the continued recognition of mycosis fungoides as a disease sui generis.

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Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY
Walter Schiller, M.D.
Cook County Hospital
CHICAGO

CASE 1 — PATENT DUCTUS BOTALLI WITH VEGETATIVE ENDOCARDITIS AND PREGNANCY

The patient is a 30 year old white female, who was told, at the age of 6 years, that a congenital heart disease was found and who has attended the cardiac clinic at Cook County Hospital for many years until November, 1940. After her third baby 6½ years ago, she developed a choking sensation with palpitation. Her physician told her to stay in bed and not to have any more children. 1½ years later, however, she had another baby; after this labor she became tired easily and heart conscious, although she has never been decompensated.

She was apparently well until September, 1941, when one afternoon she was suddenly seized with headache and dizziness, and was confined to bed. This attack lasted for 2 weeks, during which time she had alternating attacks of chills and fever. She also had night sweats, and brought up a bright red sputum which lasted for two weeks and stopped four days before admission.

The patient entered Cook County Hospital on October 4, 1941, as a pale, blonde-haired female, B.P. 118/60. Pupils were round and equal and reacted to light and accommodation. Teeth contained many fillings. Heart was enlarged to the left, sinus rhythm; rate was 120. There was a presystolic and systolic blow at the apex which was transmitted to the axilla, and a harsh, machine-like (boiler works) murmur at the base. There was decreased resonance and a few rales over the right apex posteriorly. Breasts were atrophic with small petechiae over the right one. The spleen was palpable two fingers below the left costal margin. Genitals and adnexa were normal. The diagnosis made was congenital heart disease — possibly patent ductus arteriosus — with superimposed rheumatic heart disease and with possible subacute bacterial endocarditis. During the six months of the patient's stay in the hospital, she ran a low grade fever, up to 101° F., alternating with short afebrile periods. However, she continually complained of pain over the right back posteriorly and expectorated bloody sputum. At times she ran a high septic fever, and was treated with sulfathiazole, sulfadiazine, or sulfapyridine. Her pain, however, was never relieved completely. Finally she began to complain of severe pain in the right kidney region, the left shoulder, and both ankles. X-rays of the chest suggested pulmonary infarcts, a mitral configuration of the heart, and pericardial pleuritis. Five blood cultures showed staphylococcus albus; three showed streptococcus viridans. On entrance, the hemoglobin was 67% with 3,60 R.B.C. and 7,100 W.B.C. In spite of several blood transfusions, her hemoglobin went down before she expired to 32%; 1,730,000 R.B.C. and 5,150 W.B.C. Wassermann was negative. Kahn was twice doubtful and once positive. Repeated sputum examinations for tubercle bacilli were all negative. An electrocardiogram showed slight myocardial dam-

age. Total protein and the albumin globulin ratio were within normal limits. She became progressively weaker and extremely pale, and finally expired, about six months after admission.

The body is that of a well developed and moderately well nourished, white female. The pubic and axillary hair is well developed and blonde. The skin is pale, and there is no pitting edema. There are whitish striae over the lower abdomen and both inguinal regions. Both pupils are equally dilated and round. The conjunctivae, oral mucosa, finger and toe nails are extremely pale. Teeth are in good condition. The breasts are flat with slight pigmentation of the areolas. Over the skin of the right flank and over both arms are scattered numerous pinpoint sized, dark brown petechiae.

The midline fat is 3 mm. The abdominal cavity contains 1200 cc. of a clear, light yellow, serous fluid, and the peritoneal serosa is smooth and glistening. The left pleural cavity presents a few focal adhesions over the upper lobe, and the right contains adhesions over the posterior aspect of all the lobes. The left pleural cavity contains 10 cc. and the right 600 cc. of a fluid similar to that found in the peritoneal cavity. The pericardial sac is markedly dilated and contains 200 cc. of a slightly turbid, brownish-red, hemorrhagic exudate. The pericardial sac is covered by thin, fibrinous precipitations. The circular sinus which is formed by the circular reflection of the pericardium around the large vessels, contains numerous abscess cavities, walled off by firm, fibrous adhesions and filled with a thick, yellow, creamy pus.

The heart is markedly enlarged by dilatation and hypertrophy of both ventricles, and represents a moderate cor bovinum. On opening the pulmonary artery, which, at the level of the leaflets, has a circumference of 80 mm., an opening can be seen in the posterior wall 50 mm. above the leaflets, which is 25 mm. in diameter and leads into the aorta. Beneath this anastomosis with the aorta, on the right and left sides, originates a branch, each of 20 mm. in diameter, which splits into two branches and enters the hilum of the right and left lungs, respectively. These two branches represent the normal ramification of the pulmonary artery.

The communication between the pulmonary artery and aorta, which is a persistent ductus Botalli, is not a real vessel, but a fibrotic ring only, and of much smaller diameter than the pulmonary artery or aorta. On the pulmonary side of the communication, the wall of the pulmonary artery, on its anterior aspect, is covered with soft, pink-gray vegetations, some of which have a diameter of 15 mm. and extend downward up to 12 mm. above the upper margin of the pulmonary leaflets. The posterior wall with the two openings of the right and left pulmonary arteries, is free from vegetations, and is smooth and white.

The leaflets of the aorta are slightly thickened and shortened. The free margin is occupied by pinpoint sized, verrucous, gray vegetations. Similarly, the mitral valve presents a slight thickening and shortening, with a few soft, verrucous vegetations on the auricular aspect of the free margin. There is a moderate thickening and shortening of the tendinous cords of this valve.

The tricuspid valve shows no pathological changes. The pericardial, as well as the tracheobronchial lymph nodes, are slightly enlarged, gray and edematous.

The lungs are darker than normal by passive congestion. The left upper lobe contains a firm, brownish, hemorrhagic infarct, which is 30 mm. at the surface, and 22 mm. deep. A similar, smaller infarct, the size of a hazel nut, is found at the base of the right lower lobe.

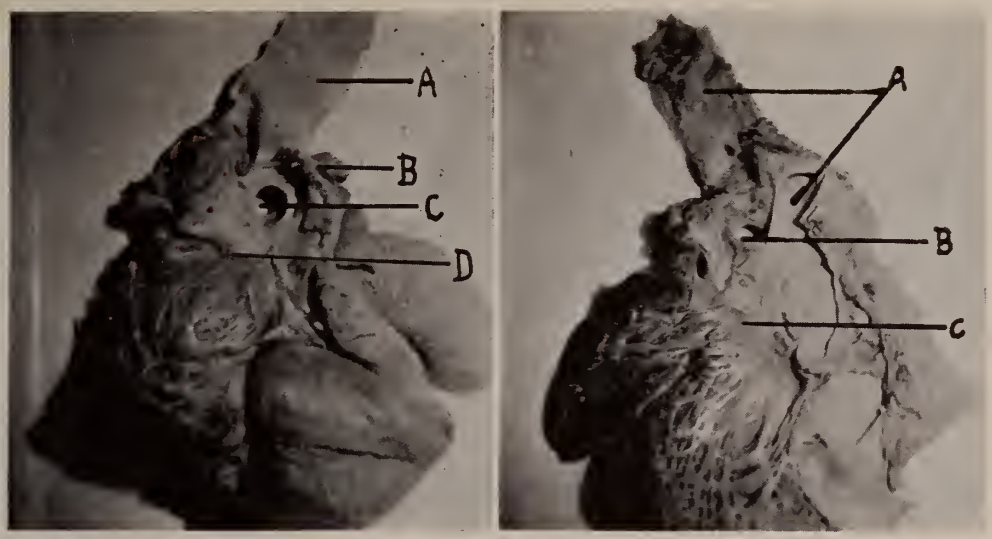
One of the ramifications of the pulmonary artery leading to the right lower lobe, is blocked by a recent embolus, but no infarct has as yet developed.

The spleen weighs 700 gms., and is markedly enlarged. The capsule is thick, gray and wrinkled. On transverse cut, the pulp is pale purple-brown with indistinct markings and extremely soft. On the lateral margin there is a small, 12 mm. white, firm infarct.

The liver weighs 2050 gms. and is very firm. It has a thin, smooth capsule, and the sectioned surface has distinct markings of a typical nutmeg liver.

The gall bladder contains 10 cc. of a thick, dark brown bile, and an 18 mm. long, black, soft, spindle-shaped bile stone, broken into two parts.

Kidneys weigh 425 gms. together. They are slightly enlarged and of soft consistency.



a. b.

Figure 1
a. Heart opened and viewed from the front.
A. Ascending aorta opened from the front.
B. Endocarditic vegetations of the pulmonary artery.
C. Ductus Botalli.
D. Leaflets of the pulmonary valve.
b. The heart seen from the rear.
A. Ascending aorta — the lower part opened from the rear; the upper part opened from the front (the photo shows the outside).
B. Ductus Botalli.
C. Leaflets of the aorta.

The capsule strips with ease and leaves a smooth, white surface, studded with pinpoint sized, red spots (so-called "flea-bite"). On transverse cut, the markings are distinct and the color of the cortex and pyramids is very pale.

Uterus is of normal size and has a small, smooth cervix without any lacerations. The endometrium is thin, white and has a smooth surface.

Both ovaries are of normal size and have a white, fibrotic surface with several deep folds. On section: both present several corpora albicans, but neither contains a fresh or old corpus luteum.

The brain has a normal external configuration with transparent leptomeninges. The meninges and brain substance appear pale and anemic.

MICROSCOPIC

The pericardium all over is covered with a thick coat of fibrin infiltrated by numerous leucocytes. The lower strata are well vascularized by numerous capillaries and organization by invading fibroblasts has begun. The pulmonary infarct shows one large area of complete necrosis; whereas, in other ones, pyknotic nuclei still can be seen. Cross sections of the small arteries, shows laminated, white and red thrombi which have not yet become organized from the intima. This proves that embolization and thrombosis of the arteries are of recent date. The alternating areas of more and of less progressed necrosis in the infarct, give evidence that it is composed of several smaller, overlapping infarcts of different ages. The rest of the lung tissue shows alveoli with red or white blood corpuscles in the lumen and a few typical heart failure cells.

The liver has a very distinct acinar structures, and presents dilated central veins and sinusoids with compression necrosis of the liver cell trabeculae. The peripheral part of the acini is composed of liver cell trabeculae with progressive fatty degeneration.

Many glomeruli of the kidneys still are normal, but the majority shows pathological changes which are characterized by increase of the nuclei of the capillary tufts, proliferation of Bowman's epithelium and accumulation of numerous leucocytes in Bowman's space. These changes proceed to marked thickening of the capsule and partial to complete hyalinization of the tufts. Some glomeruli are distinct by acute or subacute

hemorrhages in Bowman's space, which extend in the form of red blood corpuscle casts into the convoluted tubules of the first order. The interstitial tissue around the affected glomeruli presents dense inflammatory infiltration. The tubuli, in general, have a high granular epithelium with focal basal fatty infiltration; some tubules contain casts, which are hyalinized in the center, and covered on the surface with pyknotic leucocytes. Cultures made at autopsy from spleen, pericardial abscess, pericardial and hilar lymph nodes, yielded hemolyzing staphylococcus aureus.

DISCUSSION

This case represents a rare congenital anomaly of the heart, superimposed on which is a severe acute endocarditis. A statistic published by Kirshbaum and Pearlman, shows that in 11,575 consecutive autopsies performed at the Cook County Hospital in the course of nine years, only 90 cases of congenital heart disease were found. Twenty of these cases occurred in patients over 21 years of age, and among these twenty, only one case had a patent ductus Botalli.

The clinical significance of congenital heart failure depends on the extent of the functional impairment. The functional impairment due to abnormalities, which represent an arrest of development, depends in general on the phase when the development of the heart was arrested. It means, the earlier the arrest took place, the less a normal extrauterine function of the circulatory system can be expected. The final changes of the circulatory system of a new born from the intrauterine placental respiration to the extrauterine pulmonary respiration is accomplished only after birth by the obliteration of the foramen ovale, the ductus arteriosus, etc. In respect of these facts, the patent ductus Botalli is not a congenital abnormality, since every normal child is born with a patent ductus Botalli. The arrest of the closure of the foramen ovale is not very rare and in some statistics, the percentage of adult individuals with patent foramen ovale, amounts up to 25%. Although in most of these cases the opening is very small, just enough to let a needle pass, and is protected by an overlapping fold, even in the cases in which the opening is much larger, the function of the heart is not impaired. Sometimes, as an incidental finding at an autopsy, an opening is discovered through which can pass the small finger. The reason even a defect of such a size is not interfering with the normal circulation, lies in the fact that the pressure in both atria is almost equal, so that in spite of the defect, no blood is shifted from one atrium to the other; at least, not in quantities of functional importance. The same holds true for a small minority of cases with a much earlier arrest, i.e., with a defect in the intraventricular septum. Sometimes, in autopsies, cases are found in which the septal defect had not produced any signs or symptoms during life. The danger in the intraventricular septum defect lies not in a fatal impairment of the cardiac function, but the mild dysfunction creates a sensitization of the lungs for pneumonia or tuberculosis. Such patients die by the superimposed lung complications. Some of them reach advanced age without ever having shown a picture of cardiac involvement. This combination of septum defect with superimposed pneumonia or tuberculosis, has been described by the French author Roger, and is known in literature as "Maladie de Roger". A similar mechanism refers to our case. The abnormality by itself evidently did not interfere with normal circulation, because the patient could not have passed four normal pregnancies if her cardiac function had not been an almost normal one. The strain on the heart during a pregnancy is an enormous one, and from time to time we encounter pregnant women with mild mitral or rarer aortic deformities which for years have been compensated to such an extent that they were not conscious at all of having had any cardiac pathology. But they get pregnant and when the pregnancy progresses, sometimes in the 4th or 5th month, they get decompensated to an extent that the obstetrician feels obliged to induce an artificial abortion to sacrifice the baby in order to save the life of the mother. In our case, the function of the heart was evidently so perfect, that the heart could stand even the stress of a pregnancy four times. This can be explained only by the assumption that the hydrodynamic pressure on the inferior wall of the arch of the aorta is not much different from the pressure at the superior part of the wall of the pulmonary artery above its ramification, and, consequently, no considerable quantity is shifted from one vessel to the other. This fact plays a great deciding roll in the physiological obliteration of the ductus after birth. Experiments have demonstrated that no vessel obliterates as long as a considerable current of fluid is flowing through its lumen. The weak spot in our case was the creation of an area of stagnation in the upper part of the pulmonary artery between the openings of its right and left branch and the ductus. Such a stagnation leads to degeneration of the endothelium, and favors precipitation of blood and infection of the clots. The mechanism of the endocarditis in this case was a different one than in bacterial valvular endocarditis. The well known fact that the vegetations of the aortic leaflets, in general, develop at the inferior or ventricular aspect, and in the mitral valve on the superior or auricular aspect, is explained by the theory that they develop at the lines of contact where, by contact, germs, if present in the circulating blood, are forced into the endothelium. In our case, the mechanism must have been a different one, for in the areas where the vegetations developed there was no contact at all. Evidently the clotting was provoked by the stagnation, similar to the mechanism of the mural thrombi in the auricular appendages, and stagnating blood or clots, while forming, offered a very favorable breeding place for germs, in this

case staphylococci, which temporarily may have entered the general circulation from some focus of infection.

As long as the patent ductus was not complicated by any endocarditis, it produced as little cardiac signs and symptoms as those in Roger's disease. But the complicating endocarditis decided the fate of the patient, just as the complicating pneumonia or tuberculosis in Roger's disease.

One more conclusion the case allows to draw, is that a local vegetative endocarditis is not definitely bound to remnants of a rheumatic process, although this sequence is very common. There was no evidence of any rheumatic process in the wall of the pulmonary artery, where the severe endocarditis started.

The hemorrhagic glomerulitis evidently is a sequela of the septicemia. Since the latter was caused by hemolytic staphylococci, and acute, and rather severe, hemorrhagic glomerulitis developed, entirely different from the slow Löhlein's type which accompanies the endocarditis as far as it is caused by streptococcus viridans.

CASE 2 — ABORTION DUE TO VEGETATIVE ENDOCARDITIS

Patient, a colored female of 19 years (entered the Cook County Hospital on April 29, 1942 with the examining room diagnosis of pyelitis of pregnancy. Her last menstrual period was in November, 1941. Three months ago she began having sharp, shooting pains in her finger tips, which persisted, and during this period she also had chills and fever lasting from 5 to 15 minutes, and followed by sweats. For several months she had suffered from dyspnea and swelling of the ankles. There was a history of "heart trouble" since the age of 7 years. She complained also of an intermittent dull, aching pain across the lower back, with frequency of five to six times daily, and nocturia two to three times. Patient has had three full term pregnancies.

Examination disclosed patient to be a thin and emaciated colored female, with temp. of 102, respirations of 28 and blood pressure of 116/72. There were two small petechiae in the lower left conjunctiva. Heart was 3 cm. outside of midclavicular line, with regular rhythm. There was a harsh systolic murmer over the precordium, with greatest intensity over the pulmonic area. The lungs were clear. Uterus was 2 fingers below the umbilicus, and there was a positive Murphy punch on left. Liver was 2 fingers below the costal margin. Spleen was questionably palpable. Petechiae were found beneath the finger nails on the right hand.

The Wassermann and urine tests were negative. Blood culture taken during a chill revealed streptococcus viridans. X-ray examinations disclosed the heart to be enlarged, with prominent pulmonic conus, suggestive of multi-valvular lesions. Lung fields were found to be negative. Blood examinations from time to time showed the red blood count to vary from 2,730,000 to 3,970,000, and the white blood count from 7800 to 12,550. Blood protein was 750; albumin 4.30; globulin 3.20; icteric index 7; N P N 27; uric acid 2.5 and chlorides 500.

After this examination, the impression was a subacute bacterial endocarditis and a pyelitis of pregnancy, after 5 months of pregnancy.

Patient continued to have chills and fever and developed new areas of petechiae. The spleen became enlarged and tender, sepsis continued and patient developed rales in her chest. A heart rate of 240 and regular rhythm, indicated auricular flutter. Quindine lowered the rate to 100 but patient expired — twenty-one days after admission to the hospital.

The body is that of a well developed and fairly well nourished, slim, colored female with no pitting edema. The abdomen, which is at the level of the chest, shows depigmented striae over both lower quadrants. From the vaginal entroitus, project a few lumps of light, fresh, soft, placental tissue. The breasts are well developed. The mucosa of the mouth and lips is pale, and so are the finger and toe nails. The pale conjunctivae are spotted by a few pinpoint sized, fresh petechiae.

On opening the abdominal cavity, the intestinal serosa is smooth and glistening, and the peritoneal cavity is free. The uterus is a little larger than a man's fist, well contracted, and its fundus reaches the navel. The pleural cavities, with the exception of a few focal adhesions at the base of the left lung, are free. The pericardial sac contains 20 cc. of a clear, yellow, serous fluid.

The heart weighs 440 gms. Both ventricles are hypertrophied and dilated, the left more than the right. The left atrium presents, on opening, a white, fibrotically thickened endocardium. The mitral valve is markedly shrunken. The thickened free margins are covered by soft, gray

vegetations, and the tendinous cords are markedly shortened and thickened. Adjacent to the insertion of the lateral cusp of the mitral valve, an oval plaque, 20 x 30 mm. extends over the lateral aspect of the wall of the left atrium, covered by firmly adherent, soft, light pink-gray, fibrinous vegetations. The lateral cusp of the mitral valve shows in the center a shrinkage so extensive that the free margin is drawn close to the wall. From it, the gray, soft vegetations extend over some tendinous cords. The aortic valve shows a slight thickening of the leaflets with pinpoint sized, hemorrhagic vegetations over the nodules. The tricuspid and pulmonary valves are normal. Both auricular appendages are free. The coronaries have a normally thin wall and a smooth intima.

The lungs are unchanged, with the exception of a moderate terminal edema.

The liver weighs 1650 gms., is moderately firm and has a thin, translucent capsule. On section: it is light gray-pink with indistinct markings. The spleen weighs 185 gms. and is adherent to the diaphragm, corresponding to a large, hemorrhagic infarct which occupies the entire upper third of the organ. The mucosa of the small intestine is gray-tan, with high folds. In the ileum, gray spots appear, which, in the lower part, coincide with Peyer's patches (intestinal melanosis).

The kidneys weigh 300 gms., and have a slightly decreased consistency. The capsule, which strips with ease, leaves a smooth, pinkish-white surface, mottled with numerous, slightly retracted, yellow areas, which represent anemic infarcts. They are surrounded by a dark purple halo and demarcated from the adjacent tissue by deep retracting folds. The mucosa of the pelvis, which is slightly dilated, is smooth and white. Both ureters are slightly dilated and convoluted, corresponding to midterm pregnancy. The urinary bladder contains 200 cc. of a slightly turbid, dark yellow urine. The mucosa is pale and smooth. The tubes are normal in size and length, and both are patent. The right ovary contains a corpus luteum the size of a hazelnut, and of a yellow color. On transverse cut, it presents a pinhead sized cavity. The vagina is distended and dilated by an intact fetus, 15 x 9½ cm., which lies in its amniotic sac. The latter has a well developed placenta on its lower pole, and is torn only where it projects in the vesti-

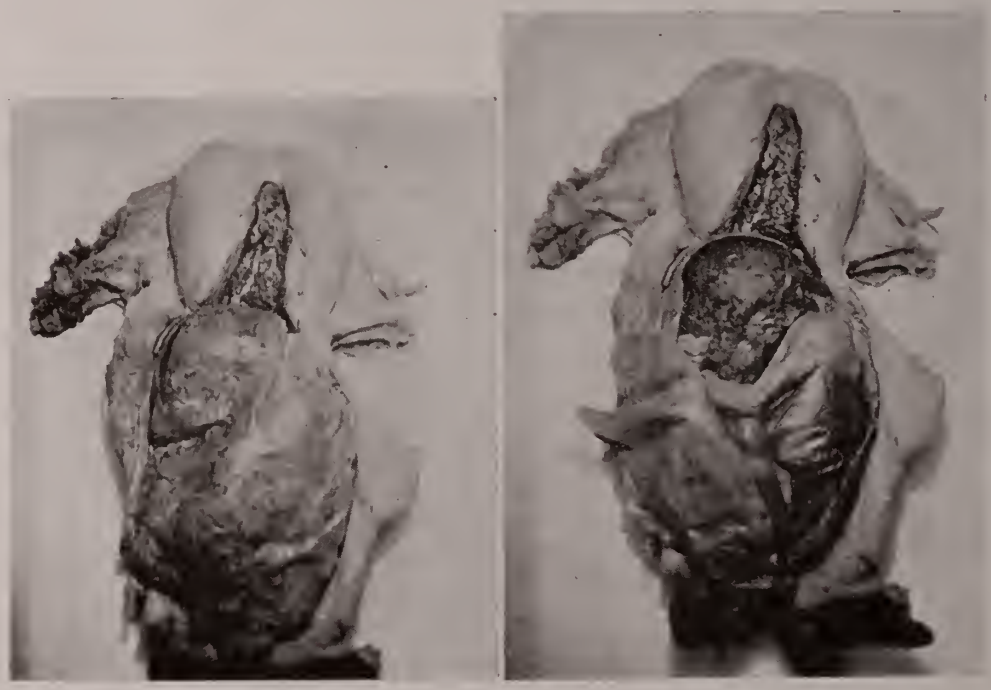


Figure 2 a. b.
Uterus and vagina opened from the front.
a. The amniotic sac intact.
b. The amniotic sac opened and the fetus visualized.
Photos by courtesy of: Dr. Milton E. Kurth, Chicago

bule. Due to almost complete contraction, the uterine and cervical cavities are narrow.

Whereas a blood culture, a few days before the exodus, yielded streptococcus viridans, the cultures of the spleen at autopsy were entirely negative.

Microscopic Findings. In many areas, the alveoli of the lungs are filled with thin, pale staining protimic exudate, which contains a few leucocytes. Some heart failure cells in the lumen of the alveoli, give evidence of moderate chronic passive congestion of the lungs. The infarct of the spleen shows complete necrosis of the pulp, whereas the follicles are still represented by well staining lymphocytes. In the liver, the central areas of the acini are necrotic by passive congestion. In some areas, the necrotic tissue already shows a beginning leucocytic infiltration. The infarcts in the kidney present progressive necrosis. The occluded arteries are blocked by densely packed leucocytes which, in some arteries extend over the necrotic wall. The balance of the kidney shows no pathological changes, except for pale staining protein in Bowman's space.

The septa of the myocardium are partially enlarged by edema and by necrosis of some adjacent muscle fibers. Such septa are loose and contain many thin-walled vessels and capillaries. The stroma at the borderline zone is moderately infiltrated with lymphocytes and histocytes. Slides of the vegetations show precipitated fibrin, dotted with extensive blue clouds of partially necrotic small cocci.

In all slides, the red blood corpuscles in the blood vessels have assumed a spindle, or crescent-like shape, representing a typical case of sickle cell disease.

DISCUSSION

In certain lines, this case is similar to the previous one. Again, we find that the rather progressive rheumatic fibroplastic deformity, which the patient acquired during childhood, caused trouble only in the acute phase. Later on, the patient had no signs or symptoms, not even when the strain of a pregnancy was added to the burdened function of the heart. Only when a bacterial infection caused an acute vegetative endocarditis on the old fibroplastic deformities of the valves, the patient succumbed without even reaching to full term, as the patient in the first case. In the short time between puberty at 12 and death at 19 years, she passed three normal, full-term pregnancies with living children, and died when the fourth was half completed. A case like this shows the fallacies and difficulties of the obstetrical prognosis in chronic heart failures.

If, before her first pregnancy, she would have asked an obstetrician whether she should take the risk of pregnancy, in view of her affected heart, a negative answer would have been wrong, since she had passed three pregnancies without any bad consequences and had three living children. But, an affirmative answer, encouraging her to get pregnant, would have failed to take into consideration the risk of a complicating superimposed acute bacterial endocarditis, which killed her in the course of her fourth pregnancy.

The role of the sickle cell disease was not too important. Many cases of sickle cell disease — this expression is to be preferred to "anemia" since many patients are not anemic — are blamed for the fatal complication in a delivery. Patients of sickle cell anemia die in a shock-like attack and the histological examination of the internal organs, particularly of the liver, confirm this clinical similarity by presenting the liver sinusoids almost blocked by the conglomerated, sickled red blood corpuscles. This histological finding was absent in our case, and the endocarditis yields sufficient explanation for the fatal complication of pregnancy, as well as it may fully account for the moderate anemia. However, the constitutional sickle cell disease may have contributed by weakening the resistance of the patient towards the infection.

Abortion en bloc — this French term means expulsion of the fetus inside of the amniotic sac — is rather frequent in the first three months of pregnancy, and becomes rarer with the progress of pregnancy. In general, during the 5th month, as in our case, the fetus is expelled first, followed by the placenta and not, as in this case, by premature separation of the placenta, within the membranes in toto.

CASE 3.—FOREIGN BODY (NEEDLE) IN THE PORTAL VEIN

The patient was a well developed, well nourished, white male, 56 years of age, and by occupation a burner in the steel mills. He was fairly well most of his life, except for a vague abdominal pain which was present for about twenty years. He would abstain from fatty or fried foods, since they would aggravate this pain.

On January 18, 1942, he suddenly developed a high fever, and one day later, became slightly jaundiced. He was nauseated but did not vomit, and had chills every day. On January 23, 1942, he went to a hospital where he remained for 11 days. During this period, he continued to have fever. He decided not to eat anything then, because it made him "sick." While in the hospital, he asked his physician to operate his hernia, but this was refused because the patient was too ill.

He returned home and stayed there for two weeks, during which time he felt fairly well. On the 17th of February, 1942, he entered the hospital and was operated for a left inguinal herniorraphy. He made an uneventful recovery and returned home on March 2, 1942. He was fairly well until 3 weeks later, when he again developed a fever, and became jaundiced. A physician was called, who said the patient had a fever of 101° F. On the next day, 3-26-42, the wife noticed blood in his urine, which has recurred several times since. His fever continued for several days, he complained of abdominal pain and became delirious.

The patient now enters Cook County Hospital on 3-28-42, in a stuporous condition, his skin is hot and dry, and he responded only to painful stimuli. Temperature is 104.6; Pulse 128; Respirations 32; Blood pressure 168/112. The pupils were round and equal, but reacted poorly to light. Tongue was dry. There was slight dullness on percussion with roughened and bronchial breath sounds over the right lower lobe posteriorly, and few moist rales at the right base. The heart was essentially normal, except for a severe tachycardia. Over the abdomen was a recent, left, inguinal herniorraphy scar. The liver was palpable one finger below the right costal margin, firm, and not especially tender. The spleen was palpable four fingers below the left costal margin. Genitalia were normal. On rectal examination, there was a canary yellow feces on examining finger.

On admission, his icterus index was 11; there was no blood in the stools; Kahn was negative and urine showed a trace of albumin. Hemoglobin was 41%; R.B.C. 2.40; W.B.C. 15,800 with 90% neutrophils and a few toxic forms. The non-protein nitrogen was 27 mgm/100 cc. of blood; creatinine 1.4 mgm. and uric acid 2.9 mgm. A chest plate was negative. A diagnosis of cirrhosis of the liver with secondary splenomegaly was made, and to rule out G-I malignancy. Patient became moribund and further adequate examination was impossible. Two days after admission a spinal tap showed the fluid under increased pressure; Pandy ++++; of a yellowish color; 550 cells/mm, mostly polys. He also developed a rigid neck, and expired on 4-2-42, five days after admission.

The body is that of a well developed, white male, with dark brown hair and brown eyes. The skin over the entire body is yellowish, and both conjunctivae are pale gray-tan with a yellowish tinge, and are slightly injected and edematous. In the left inguinal region is an ancient surgical scar, 12 cm. long. On the right side of the scrotum is a 3 mm. lesion with a light yellow, muco-purulent material draining from it. The peritoneal cavity contains 200 cc. of a clear, serous fluid. The fundus of the gall bladder is attached to the transverse colon and also to the duodenum by fibrous adhesions. The peritoneal serosa is smooth and shiny. The left pleural cavity is free; the right presents a few focal, stringy adhesions over the apex of the upper lobe. The pericardial sac contains a few cc. of a clear, watery, serous fluid. The anterior portions of both lobes of the left lung are feathery and crepitant. The posterior portions are deep purplish-red with focal areas of dark purple-brown, granular consolidation. The same changes are found in the three lobes of the right lung; the anterior portions are free and feathery. The posterior portion is involved by confluent, hemorrhagic bronchopneumonia. The mucosa of the bronchi is deep purplish-red, due to inflammatory hyperemia and covered by a frothy, blood-tinged, muco-purulent material.

The heart weighs 345 gms. The myocardium is light purplish-tan, very soft and flabby. The intima of the aorta shows a few slightly elevated plaques of fatty degeneration.

The liver weighs 1700 gms. and is very soft. The capsule is thin and smooth. On the inferior surface, near the quadrate lobe, is a slightly projecting, soft, fluctuant area, which upon pressure exudes a small amount of light yellow pus, through a pinpoint sized opening in the capsule. On section, the liver is purple-tan-brown with deep purple-red, acinar centers, and light yellow peripheral acinar markings. Numerous abscesses, measuring from 2 mm. to 10 mm. in diameter, are scattered throughout the entire liver. Near the quadrate lobe, is a confluent area of abscesses measuring 5 cm. in diameter. Most of the larger branches of the portal vein, particularly near the hilum, have markedly thickened walls, and the intima is shaggy and discolored purplish-red to a dirty brown. They are filled with a thick, tenacious, yellow-tan, muco-purulent fluid. The porto-

hepatis is markedly thickened and firm, and there are two small, well walled off abscesses up to 3 mm. in diameter.

The wall of the portal vein is markedly thickened to 3 mm., where it enters the liver, and is filled with a tenacious, yellow-tan, muco-purulent material. In this thick pus lies freely a slightly rusted, straight, black needle with one pointed end and the other end with a small eye. All the bile ducts are free, and upon pressure over the gall bladder, bile oozes freely from the papilla.

The gastro-epiploic vein contains muco-purulent, thick fluid; the pancreatico-duodenal vein, near the head of the pancreas, before it joins with the gastro-epiploic vein to empty into the splenic vein, is occluded by a large thrombus of 3 cm. in length. Gall bladder and pancreas are normal. Small and large intestines present a uniform, pale tan and slightly edematous mucosa. Kidneys are soft and weigh 390 gms. together. On section, the capsule strips with ease, leaving a purplish-tan, smooth surface which has a cooked appearance. The pelvic organs present no pathological changes.

Microscopic. Microscopically, the liver shows a progressive, chronic thickening of the interacinar septa, and marked enlargement of the periportal fields. There is a moderate, chronic, inflammatory infiltration of the septa and the fields by lymphocytes. In the central part of the acini, the central vein and the adjacent sinusoids are slightly dilated and stuffed with R.B.C. in consequence of passive congestion. In a few areas, the congestion has resulted in a compression necrosis of the central ends of the liver cell trabeculae, and to the establishing of small fields of hemorrhagic necrosis. Scattered all over the parenchyma are small abscess cavities, some of which extend only over parts of acini; the larger ones involving and destroying many acini. The abscess cavities contain leucocytes, and only in the border line zone, remnants of liver tissue are still visible. Particularly in the larger abscesses, a demarcation zone is formed by a fibrous granulation tissue. In some areas, this process has already resulted in the formation of a scarry pyogenetic membrane.

The pathology of the liver has to be classified as moderate beginning periportal cirrhosis with central passive congestion, overlapped by multiple pylephlebitic abscesses.

The spleen and intestines present moderate passive hyperemia. Gastric mucosa is slightly hypertrophic. In the kidney, the glomeruli and vascular walls are normal. The cells of the tubuli are slightly enlarged by hydropic degeneration. The prostate presents moderate benign glandular hyperplasia.

The heart muscle shows indistinct striation of the muscle cells, with mitral focal fragmentation.

DISCUSSION

When we presented this case at our weekly conference, we had to protect the surgeons against the suspicion, raised by some participants of the discussion, that the needle was left over as a remembrance of the operation of the inguinal hernia. This can be ruled out definitely. First, for the reason that the needle was a typical household needle, which no surgeon ever uses for his work, especially since the eye is far too narrow to pass a suture used for inguinal hernias. Second, the abdominal troubles of the patient, pain and fever, started several weeks before the operation was performed. Most probably the needle was swallowed by the patient with food. Dressmakers or tailors frequently are accustomed to hold needles in the mouth when both hands are engaged in work, but usually this is done with pins and not with sewing needles, and when a needle is swallowed accidentally, at such an occasion, as it unfortunately happens once in a while, it is immediately called to the patient's attention. Our patient was a "burner in a steel mill" and thus, professionally, not engaged in sewing. Two possibilities have to be considered, either he swallowed the needle with food by negligence, or the needle entered the body by trauma. When a needle enters the lumen of the intestines, the mucosa is protected to a certain extent by the muscularis mucosa, which succeeds by alternating contraction and relaxation, the needle rotates over 180°, so that when it enters the small intestine with the sharp point ahead, it reaches the large intestine with head forward, as Alfred Exner has proved many years ago in experimental work done on cats. Evidently, in this case, this mechanism did not work, and the needle perforated somewhere into the intestinal wall, and entered the mesenteric vein and reached the porto-hepatis with the blood stream. It produced no lasting changes, when entering, which could have been traced at autopsy, but caused an infection of the portal system and a pylephlebitis. From the pylephlebitis, the fatal liver abscess spread in the hepatic parenchyma, which coincidentally presents cirrhotic changes. A second hypothesis is, that the needle entered the body from

the scrotum, where it caused a small abscess on the right side, and migrated from there to the floor of the pelvis to enter the hemorrhoidal vein. The autopsy yielded no evidence for this theory, and it is not likely that a needle could enter the scrotum traumatically without calling the individual's attention to it. The gastro-intestinal route is more probable, and since the coroner found no suspicion of any one's feeding the needle to the patient with hostile intention, and also the patient was mentally normal and not an insane case of the type that swallows inedible objects, negligence in preparing the food or possibly by placing the food over the location where the needle was lying, could be blamed in this case.

SAYS FIRST AID STUDENT SHOULD REMEMBER HE IS NOT A DOCTOR

The Improper Treatment Of Disaster Victims May Result In Increased Injury Or Even In Death, Writer Advises In Hygeia

Improper treatment of disaster victims may result in increased injury or even in death, Lois Stice, Washington, D. C., warns in *Hygeia, The Health Magazine* for June, emphasing that the student of first aid should bear in mind that he is "a first aid worker and not a physician."

The civilian defense first aid course, conducted by the Medical Division of the Office of Civilian Defense, Washington, D. C., in cooperation with the American Red Cross, explains what to do for many types of wounds, Miss Stice says, but in every case the first commandment is always to call the physician.

"The first aid classes now being given," she explains, "concentrate on the injuries of war. The peacetime course has been stripped down to the essentials needed in the emergency that is now on us. . . ."

Regarding these essentials, Miss Stice says that first "you will need to know something about shock, or collapse, which occurs to some degree in all injuries. First aid measures for shock are simple, but remember—a war casualty may die if these measures are neglected! Shock following injury probably causes more deaths than the injuries themselves. . . . . Lay the person flat with his head low and feet raised. Keep him warm with blankets (both over and under him) and hot water bottles. Give him warm and sweetened drinks (unless unconscious) but no alcoholic drinks. . . .

"Internal injuries, frequent in this war of bombs, are dangerous and severe. . . . All the first aid helper can do until the doctor comes is to keep the injured one warm, prop him up if the injury is in the chest or head or keep him lying down if it is in the abdomen. . . ."

While injury to the face may seem most gruesome to the novice worker, the author points out that it is not so dangerous as are many other injuries. A person suffering from this type of wound should be turned on his face so that the blood will not run into the nose and mouth.

"What to do to control hemmorrhage is one of the vital lessons to be learned by those who are likely to be caught in a disaster," Miss Stice says. "With splintered glass flying in all directions, there may be cut arteries. You can identify arterial bleeding by the spurting of blood with each beat of the heart. . . . A tourniquet is rarely necessary. First aid instructors constantly warn that the tourniquet is dangerous unless it is loosened evey fifteen minutes.

"Fire is an important element of strategy in this war. . . . Besides fragments of exploding bombs, there are exposed electric wires, brands from burning buildings and dangerous chemicals to cause all degrees and types of burns. If the doctor is immediately available, all the first aider does is to apply a sterile dressing over the wounds without removing clothing, wrap victim in a blanket and call the doctor. . . .

"The first rule in handling fractures is expressed by orthopedic surgeons in the picturesque phrase 'Splint 'em where they lie!" Moving a person with a fracture before the bone is properly splinted may increase shock and result in death, or it may turn a simple fracture into a compound one. . . .

"A victim with a broken neck must not be allowed to move his head. Keep him lying in the position in which he was found, cover him with blankets or wraps and get a doctor. If it is imperative to move a person with a broken neck . . . he should be placed on something rigid like a door . . . and moved with extreme care by at least three persons. . . . When the back is broken the same extreme precautions must be observed. Any move that doubles the injured man forward may cause death, or paralysis for life. . . ."

SCIENTISTS URGED TO SAVE VALUABLE JOURNALS

Scientists feeling the patriotic urge to turn over to waste-paper collectors piles of old technical journals which they no longer need are urged to look them over first with an eye to their possible use in rebuilding war-damaged libraries abroad. Many such libraries have lost all or part of their files of scientific periodicals, or have been unable to keep them complete due to interruption of the mails or loss of shipments at sea.

The American Library Association has appointed a special committee which is functioning under the chairmanship of John R. Russell, librarian of the University of Rochester, N. Y. Scientists who have accumulations of old journals are requested to write to Mr. Russell, before turning them over to waste-paper drives.—*Science News Letter,* April 25, 1942.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

Sergeant William Wayne Chapman, 31, son of Mrs. William D. Chapman and the late Doctor William D. Chapman, former President of the Illinois State Medical Society, was killed Sunday, August 16th in an airplane accident presumably near Fort Richardson, Alaska, where he had been stationed. He enlisted in the army air corps in Denver and was assigned to March Field. He later was transferred for special training to Scott Field at Belleville, Illinois. He returned to March Field, where he remained until being assigned to duty in Alaska in February, 1941. He is believed to have experienced much actual combat service during recent action against the Japs in the northern Pacific.

Surviving Sergeant Chapman are his mother who lives in Silvis, his sister who is with the naval intelligence department in Washington, D. C. and his wife, the former Mary Gaspar of California.

Members of the Society extend their sympathy to Mrs. Chapman and the family.

Dr. Pashnpati J. Sarma, formerly associate professor of surgery at the University of Illinois College of Medicine, has been promoted to the rank of colonel in the Army while serving at Camp Barkley, Texas.

Dr. E. Mann Hartlett, 45, state medical officer of the Selective Service System in Illinois and wounded war veteran of World War I, has been promoted from Major to lieutenant-colonel of the Army of the United States, effective August 8, 1942. Colonel Hartlett enlisted in the United States Army in December, 1917 at the age of 19 years while a student at Ripon College. He was assigned to the 32nd Division and served fifteen months overseas with the 107th Engineers. He was wounded in action and later was decorated with the Order of the Purple Heart. Commissioned a first lieutenant in the medical reserve corps in 1928, Dr. Hartlett was promoted to Captain in 1932 and achieved the rank of Major in 1937. He went on active military duty as state medical officer for the Selective Service System on April 15, 1941. Colonel Hartlett is married and resides in Glenview. He specialized in eye, ear, nose and throat and maintained an office in Evanston before re-entering active military service.

L. R. Limarzi addressed the Kankakee County Medical Society at its opening fall meeting in Kankakee, September 8th.

Albert Vanderkloot of the University of Illinois College of Medicine addressed the Vermilion County Medical Society at its opening fall meeting in Danville on September 1st.

Dr. Max Thorek was presented with the Distinguished Citizens Medal by the Veterans of Foreign Wars of the United States, at a banquet at the Provident Hospital, Detroit, Michigan, on Thursday, August 6, 1942.

Aaron Arkin addressed the Effingham County Medical Society on September 8th. His subject was "The Differential Diagnosis of Organic Heart Disease."

DEATHS

Max Aszmann, Chester; Homeopathic Medical College of Missouri, St. Louis, 1890. Member of the Chester Board of Health for over 20 years. Died July 16, 1942 at the age of 77 years.

Daniel Fisher Beacom, LaHarpe; Rush Medical College, 1894. Practiced 27 years at LaHarpe. Died August 3, 1942 at the age of 81.

Howard B. Boone, Chandlerville; Northwestern University Medical School, 1897. Died July 28, 1942 at the age of 69.

Bertha E. Bush, Chicago; Northwestern University Women's Medical College, 1889. Member of the staffs of Ravenswood, West Suburban, St. Francis and Women's and Children's Hospitals. Former professor of pathology at Northwestern University. Died July 25, 1942 at the age of 77.

Peter S. Clark, Chicago; Hahnemann Medical College, 1899. Attending surgeon Chicago Memorial Hospital. Died July 30, 1942 at the age of 67 years.

Jennie Anna Duncan, Ottawa, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1910; aged 81; died, June 28, of cerebral hemorrhage.

Adolph W. Faulbaum, Chicago; Washington University School of Medicine, 1903. Died July 12, 1942 at the age of 68.

Joseph H. Gann, Ganntown, Illinois; St. Louis University Medical Department, St. Louis, 1905. He practiced for the past 22 years in Brookport, Illinois following 15 years in Jackson County. Surgeon for the Illinois Central Railroad, active in medical organizations, holding lifetime secretaryship of Massac County Medical Society and member of the A. M. A. About 3 months prior to death, Dr. Gann received an emeritus membership certificate from the Illinois State Medical Society. Died August 6, 1942 at the age of 61 years.

David H. Harris, Marion; Missouri Medical College, St. Louis, 1897. Had practiced in Marion since 1918. Died July 27, 1942 at the age of 73 years.

C. K. L. Hawley, Danville; Chicago Homeopathic Medical College, 1884. Fifty Year Club member. Died August 3, 1942 at the age of 80 years.

John M. Hayes, Decatur; St. Louis University School of Medicine, 1914; called to active duty as a lieutenant colonel in the medical reserve corps of the U. S. Army Oct. 10, 1941; was awarded the British Military Cross for bravery while in service with the British Army during World War I and was a membe of the Order of the Purple Heart; aged 57; stationed at Camp Forrest, Tenn., where he died June 29th of coronary thrombosis.

Samuel W. Hopkins, Walnut; University of Pennsylvania Medical School, 1895; president of the Bureau County Medical Society in 1899; was in active practice in the community for 44 years. Died suddenly of a heart attack on August 11, 1942 at the age of 76.

Gustav Kolischer, Chicago; University of Vienna, Austria, 1886; senior attending surgeon Michael Reese and Mt. Sinai Hospitals. Died August 11, 1942 at the age of 79 years.

John D. McGregor, Chicago; Rush Medical College, 1894; had practiced in Chicago for forty-five and served as chairman of the board of St. Anthony's Hospital; Died August 5, 1942 at the age of 72.

Charles H. Manning, Chicago; Rush Medical College, 1894; had practice din Chicago for forty-five years. Died August 21, 1942 at the age of 71.

Edward Powers Norcross, Highland Park; Northwestern University Medical School, 1904; senior member of the staff of St. Luke's and Highland Park Hospitals. Had practiced medicine in Highland Park for twenty-five years. Died of a heart attack on August 5, 1942 at the age of 64 years.

Thomas W. Priest, Springfield; Northwestern University Medical School, 1903. Former city and county physician. Died July 28, 1942 at the age of 62 years.

Marie G. Salerno, Chicago; Chicago Medical School, 1931; staff surgeon at Mother Cabrini Hospital. Died suddenly August 22, 1942 at 35 years of age.

Elmer Fred Scheve, Mascoutah; Washington University School of Medicine, St. Louis, 1903. Had been practicing in Mascoutah all his life. He was a fellow of the A. M. A., a member of the Illinois State Medical Society and St. Clair County Medical Society. Served in the World War No. 1 as 1st Lieutenant in the medical corps. Died July 22, 1942 at the age of 60.

James R. Tweed, Marissa; Chicago Homeopathic Medical College, 1886. Had practiced medicine in Marissa for over fifty years. Died July 26, 1942 at the age of 87.

Roy H. Freeman, Chicago; Loyola University School of Medicine, 1917. Served in the army medical corps in World War No. 1. Died suddenly from a heart attack on August 16, 1942 at the age of 55 years.

John Bell Howe, Hines; Chicago Homeopathic Medical College, 1895. Died August 17, 1942 at the age of 67.

Edgar E. Kirby, Mackinaw; College of Physicians and Surgeons, Keokuk, Iowa, 1896. Died August 17, 1942 at the age of 71 years.

The source of the great bulk of infections with tuberculosis is a human carrier with a pulmonary cavity. While the home is probably the place of most childhood and some adults contacts, many primary infections and more reinfections must occur in the place of work. Nurses, physicians and attendants on the sick encounter a real occupational hazard from infection itself and this hazard should be accepted as incidental to the professional life while hospital management should assume the obligation of minimizing opportunities for mass infection. Saranac Lake Symposium on Tuberculosis in Industry, Saranac Lake, June, 1941.


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min G) from natural sources, nutritionally
tant minerals (iron, copper, calcium an
phorus), is readily digested, low in c
palatable, convenient and economical.
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Add milk or water, hot
Serve with milk or
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REPLACE LID
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Book Reviews

COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION. Edited by Richard M. Hewitt, B.A., M.A., M.D., A. B. Nevling, M.D., John R. Miner, B.A., Sc.D., James R. Eckman, A.B., and M. Katharine Smith, B.A., Volume XXXIII, 1941, Published May, 1942. Philadelphia and London, W. B. Saunders Company, 1942.

As in previous years the 1942 edition of this popular book contains a wide variety of subjects and is made up principally of papers which were written for publication by the members of the staff of the Mayo Clinic and Mayo Foundation.

Although covering the general field of medicine and surgery in this volume of nearly 1100 pages, there are some sections which are worthy of comment in this 1942 volume. The subject of Aviation Medicine is well covered with some ten fine papers which will be of special interest at this time to the many physicians who are interested in this subject, either as aviators, medical examiners for the Bureau of Aeronautics, or as flight surgeons.

As in previous volumes, the subjects in the alimentary tract and genito-urinary organs are well covered indeed. More attention each year has been given to the blood and circulatory organs in keeping with the ever increasing popularity of this important field. Excellent presentations of the present day problems concerning low back pain and the role of the intervertebral disks are given with a discussion of the roentgenological examinations and spinograms.

A considerable number of fine papers are published relative to anesthesia and gas therapy which will be of interest to many.

Once more the Mayo Clinic Volume for 1942 will find an important place in the libraries of many members of the medical profession, many of whom no doubt have all previous editions on file.

DISABILITY EVALUATION PRINCIPLES OF TREATMENT OF COMPENSABLE INJURIES. By Earl D. McBride, B.S., M.D., F.A.C.S., Diplomate, American Board Orthopaedic Surgery. Assistant Professor in Orthopaedic surgery, University of Oklahoma School of Medicine. Art work by Herbert Chezam. Three Hundred Seventy-Four Illustrations. Third Edition Revised. J. B. Lippincott Company, Philadelphia, London and Montreal. Price $9.00.

With the ever increasing interest in industrial medicine and the care of compensable injuries, this book should be of much interest to many physicians who have occasion to determine the permanent degree of disabilities.

The physician cannot properly evaluate the permanent damage to various body structures haphazardly, but he must have a definite basis for his final determination which must be in accordance with established principles.

The author of this fine book has given much information which should be of value in the determination of the amount of impairment in the functions of body structures following injury, and at the same time, a considerable amount of information is given concerning the various types of deformities and disabilities seen in industrial work.

The physician called upon to give an opinion

(Continued on page 30)

The Medical Relations Division
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BOOK REVIEWS (Continued)

of this permanent damage in terms of percentage of function will find much data which will help him. Many illustrations likewise aid materially in the determination of disability from a percentage standpoint. Tables are also found which will aid greatly in arriving at a definite conclusion, making the percentage determination much easier.

This is the third edition of the book, which is well illustrated, and of more than 600 pages. It should once more be popular with an increasing number of readers.

Stedman's Practical Medical Dictionary. Fifteenth Revised Edition. By Stanley Thomas Garber, B.S., M.D., University of Cincinnati, College of Medicine. William & Wilkins Company, Baltimore, 1942. Price $7.50.

This is the 15th edition of this popular dictionary revised by Stanley Thomas Garber, B.S., M.D., a nephew of the late Dr. Stedman. With the ever increasing development of medical terms this edition contains up to the minute definitions of all that is new. The work is well prepared and well arranged for quick reference with thumb index, clear type with each word defined in black face, making it easy to find in a moment.

The new author has most meticulously carried out the policies and principles long established in the earlier editions by Dr. Stedman. Some sections have been materially revised, such as the many vitamins, biochemical and chemotherapeutic agencies, many of which have been added since the last edition. Another notable addition is the long list of the sulfonamides with a careful description and graphic formula for each.

The physician will find this a handy volume to have on his desk for ready reference on numerous occasions, and a desirable addition to any library.

A Manual of Pharmacology and its Applications to Therapeutics and Toxicology. By Torald Sollmann, M.D., Professor of Pharmacology and Materia Medica in the School of Medicine of Western Reserve University, Cleveland. Sixth Edition, Entirely Reset. Philadelphia and London. W. B. Saunders Company, 1942. Price $8.75.

This is the sixth edition of a book which has always been most popular with the student, the physician and the pharmacist. Realizing the many additions to the field of Pharmacology in recent years, the book has been entirely reset, and the newer therapeutic agents are discussed in detail and the proper evaluation given for each.

You need only to note the table of contents to realize that the book is really up to date. In form, it follows closely the general arrangement seen in earlier editions. Although this book has approximately 1300 pages of text, more space is devoted to the consideration of the newer and more popular pharmaceutic agents, while some preparations appearing in previous editions have been eliminated, or the discussions have been limited.

The more important drugs are designated by asterisks making it easy for the reader to determine what is considered best in the various drug groups.

Every physician as well as students and others will find this volume a valuable addition to the library, and will find that it may be used freely as a reference source.

Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

A Textbook of Gynecology By Arthur Hale Curtis, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecological Service, Passavant Memorial Hospital, Chicago. Fourth Edition, Reset. With 401 Illustrations Chiefly by Tom Jones. W. B. Saunders Company, Philadelphia.

(Continued on page 32)

Before the TEXTBOOK PICTURE *Develops*



Today, the physician seldom sees a typical textbook case of fully developed vitamin deficiency.

* * *

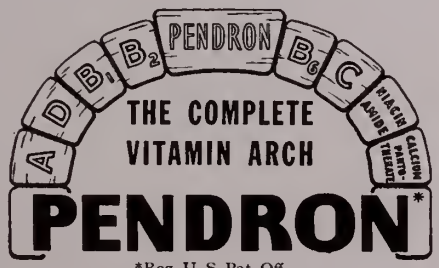
On the other hand, there are thousands of patients who are partially lacking in many or all of the vitamins. These individuals often present no tangible evidence of the deficiency—the symptoms are of a general nature—but improvement is noted when adequate replacement therapy is instituted.

* * *

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BOOKS RECEIVED (Continued)

Demonstrations of Physical Signs in Clinical Surgery. By Hamilton Bailey, F.R.C.S., (Eng.) Surgeon, Royal Northern Hospital, London; Surgeon and Urologist, Essex County Council. Eighth Edition, Revised, with 455 Illustrations, a number of which are in colour. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1942. Price $7.00.

Synopsis of Pathology By W. A. D. Anderson, M.A., M.D., Assistant Professor of Pathology, St. Louis University School of Medicine; Pathologist, St. Mary's Group of Hospitals. With 294 Text Illustrations and 17 color plates. St. Louis. The C. V. Mosby Company, 1942.

Advances in Internal Medicine, Volume I. Editor, J. Murray Steele, M.D., Welfare Hospital, New York University Division, Welfare Island, N. Y. Interscience Publishers, Inc., New York, N. Y., 1942. Price $4.50.

Central Autonomic Regulations in Health and Disease. With Special Reference to Hypothalamus. By Heymen R. Miller, M.D., Associate Attending Physician, Montefiore Hospital, New York City. Introduction by John F. Fulton, M.D., M.A., D.Phil., (Oxon) Sterling Professor of Physiology, Yale University. Gruen & Stratton, New York, 1942. Price $5.50.

The National Formulary. Seventh Edition. National Formulary VII. Prepared by the Committee on National Formulary by authority of the American Pharmaceutical Association. Official from November 1, 1942. Published by the American Pharmaceutical Association. Washington, D. C. 1942.

Cabot and Adams Physical Diagnosis. Thirteenth Edition. By F. Dennette Adams, M.D., Instructor in Medicine, Harvard Medical School, Courses for Graduates. Physician, Massachusetts General Hospital. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1942. Price $5.00.

Standard Nomenclature of Disease and Standard Nomenclature of Operations. Edited by Edwin P. Jordan, M.D., American Medical Association, 535 North Dearborn Street, Chicago, 1942.

The Medical Applications of the Short Wave Current. By William Bierman, M.D., Attending Physical Therapist, Mount Sinai Hospital, New York City: Assistant Clinical Professor of Therapeutics, New York University College of Medicine. With a Chapter of Physical and Technical Aspects by Myron M. Schwarzschild, M.A., Physicist, Beth Israel Hospital, New York City; Instructor of Physics in Radiology, New York University College of Medicine. Second Edition. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1942. Price $5.00.

The Hand: Its Disabilities and Diseases. By Condict W. Cutler, Jr., M.D., F.A.C.S., Associate Surgeon, Roosevelt Hospital; Director of Surgery, Welfare Hospital; Consulting Surgeon, New York Dispensary; Chief, Emergency Medical Service, New York County; Fellow of the American Surgical Association. With 274 Illustrations. W. B. Saunders Company, Philadelphia and London, 1942.

Medical Clinics of North America. July 1942. Symposium on Industrial Medicine. W. B. Saunders Company, Philadelphia. Yearly, Cloth, $16.00; Paper $12.00. Published Bi-Monthly.

The Mind and Its Disorders. By James N. Brawner, M.D., Medical Superintendent, Brawner's Sanitarium, Smyrna, Georgia. Walter W. Brown Publishing Company, 223 Courtland St., N.E., Atlanta. Price $3.50.

Physical Chemistry for Students of Biochemistry and Medicine. By Edward Staunton West, Ph.D., Professor of Biochemistry in the University of Oregon Medical School. New York, The MacMillan Company, 1942. Price $5.75.

The plague of tuberculosis is not one of the irresistible scourges of nature, to which we must bow as to the inevitable; the remedy and the means of prevention are known, the difficulty is to prevail upon the public to avail themselves of this knowledge, and thus protect their homes from avoidable loss of life. From a letter received by the Canadian Tuberculosis Assn., in 1912 from the Duke of Connaught, late Governor-General of Canada.



BACTERIOLOGIC WARFARE?

● Bacteriologic warfare appears impractical at present, since it is doubtful whether it could increase *existing* problems of defense against pathogenic organisms.

One such current problem affecting our *war effort* is that of defense against the common cold which annually deprives industry of at least 45 million man-days of work—a loss equivalent to the full-time labor of 150,000 persons.[1] In fact, colds are responsible for about half of *all* work-time lost in war industries as a result of illness.

Fortunately, the incidence and severity of the common cold may now be reduced by means of 'Vacagen' Oral Cold Vaccine Tablets.

Since colds may be caused by viruses, bacteria, or a combination of both agents,[2] and immunologic response to the so-called cold virus is relatively transient, protective measures are directed towards active immunization against specific bacteria associated with severe types of coryza. Oral administration of the water-soluble antigenic factors of these bacteria has proved to be an effective means of establishing immunity from them. • • •

Each 'Vacagen' Tablet contains carefully proportioned quantities of the water-soluble antigenic derivatives of approximately 60,000 million organisms commonly associated with infections of the upper respiratory tract. The fresh antigens are rapidly frozen, dehydrated under high vacuum, and made into enteric-coated tablets for oral administration.

'Vacagen' Oral Cold Vaccine Tablets are supplied in bottles of 20, 100, 500 and 1,000.

1. J.A.M.A., 116:1342, March 29, 1941.
2. Zinsser, H., & Bayne-Jones, S.: A Textbook of Bacteriology, D. Appleton-Century Co., 1934.

'VACAGEN' ORAL COLD VACCINE TABLETS

Sharp & Dohme
PHILADELPHIA

DOCTORS' AVERAGE AGE OF DEATH IN U. S. DURING 1941 WAS 65.9 YEARS

The Annual Summarization Of Mortalities Of Physicians By Journal Of A. M. A. Shows Heart Disease Leading Cause

The average age at death of physicians in the United States in 1941 was 65.9 as compared with 66.3 in the previous year, *The Journal of the American Medical Association* reports in its June 13 issue. Heart disease again was shown to be the leading cause of death. *The Journal* says:

"Last year 3,527 obituaries of physicians were published in *The Journal*. Of the total 3,354 were residents of the United States and 173 of Canada. Two physicians died in Puerto Rico, 3 in the Philippine Islands, 2 in Hawaii and 1 in China. One was killed in West Africa while serving as captain in the British Army. The total group included 122 obituaries of women physicians.

"Some obituaries are reported too late for publication and some are withheld for lack of suitable data with which to compile a satisfactory notice. Thus 241 more deaths were totaled in the American Medical Directory Report Service, including the United States, possessions and Canada, than were listed in 1941 in *The Journal*. A total of 3,460 is considered here for the United States alone or 106 more than the 3,354 deaths reported in *The Journal*.

"For the academic year ended in June 1942 there were 5,275 graduates of medical schools in the United States. Deducting the number of physicians whose obituaries were published, there was an indicated net increase to the profession of 1,921. Including those who received their first license to practice medicine during the calendar year, there was a gain of 2,327. This difference is accounted for principally by graduates of foreign schools.

"*Age.*—The average age at death of those classified as of the United States was 65.9 as compared with 66.3 years for a total of 3,450 deaths published in 1940. Thirty physicians died between the ages of 25 and 29, 42 between 30 and 34, 72 between 35 and 39, 102 between 40 and 44, 151 between 45 and 49, 210 between 50 and 54, 361 between 55 and 59, 459 between 60 and 64, 510 between 65 and 69, 518 between 70 and 74, 413 between 75 and 79, 299 between 80 and 84, 131 between 85 and 89, 50 between 90 and 94, 1 between 95 and 100, and 4 were 100 or over. The exact age of death was unknown in 1 case.

"*Causes.*—Heart disease again accounted for the greatest number of deaths among physicians. As is customary, contributory causes have been included in the tabulation. Coronary thrombosis and occlusion led the list with 1,034 deaths. Other coronary diseases totaled 119. Other diseases of the heart and circulatory system accounted for 781 deaths. Four hundred and two were classified under cerebral hemorrhage and 353 under arteriosclerosis. Cancer and tumors in various forms accounted for 328 deaths. Tuberculosis was designated the cause in 39 deaths, diseases of the blood and lymphatic system in 35, diabetes in 56, broncho-pneumonia in 197, lobar pneumonia in 58, other diseases of the respiratory system in 62, allergy and asthma in 5, appendicitis in 14, peptic ulcers (stomach or duodenum) in 26, other diseases of the gastrointestinal tract in 107, cirrhosis of the liver in 41, acute nephritis in 26, chronic nephritis (including cardiovascular renal and cardiorenal disease and uremia) in 219, diseases of the genitourinary system in 36, bacteremia and other infectious diseases in 39, influenza in 24, abscesses and carbuncles in 10, acute and chronic rheumatism in 6, diseases of the thyroid in 2, postoperative in 21, Addison's disease in 1, alcoholism in 3, poliomyelitis in 3, pulmonary embolism in 16 and other ill defined or unspecified causes and senility in 90. Each of the following accounted for 1 death: typhus fever, toxemia of pregnancy, tetanus and heat prostration. Two deaths were attributed to Rocky Mountain spotted fever.

"*Accidental Deaths.*—There were 152 accidental deaths in 1941. Automobile accidents accounted for 83 deaths as compared with 105 in 1940. Other accidents were falls 21, burns 7, airplane accidents 6, drowning and poison 4 each. One death was recorded in a train accident, and 4 involved automobile and train collisions. Twelve unexplained fractures were included in the accidental deaths. One physician

(Continued on page 36)



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THE COMPLETENESS of Biolac is a double health safeguard for infants.

Biolac provides for *all* nutritional needs of young infants, *except* vitamin C, and it requires simply dilution with boiled water. It thus minimizes the incidence of upsets arising from either formula contamination or unintentional omission by mothers of important formula ingredients.

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DOCTORS' DEATHS (Continued)

was killed when he fell down an elevator shaft, and another was electrocuted by a short circuit in an x-ray machine. One accidental death was ascribed to x-ray burns. Bullet wounds, carbon monoxide, explosions, overdoses of medicine and asphyxiation were among the causes of accidental deaths classified in 1941 reports.

"Suicides and Homicides.—Suicides accounted for 67 deaths in 1941. Bullet wounds led the list with 25. Carbon monoxide, poison and drugs were next in classification of method with 7 deaths each, hanging 6, cut artery 5, illuminating gas 3, drowning 1, and 1 death occurred from a fall. In 5 cases the method was not reported. Four homicides were recorded.

"Civil Positions.—Among the decedents were 191 physicians who were or had been teachers in medical schools, 518 who had served in World War I, 57 veterans of the Spanish American War and 5 Civil War veterans. One hundred and twenty-three physicians were or had been health officers, 101 members of boards of education, 86 members of boards of health and 21 members of boards of medical examiners. There were 58 coroners, 44 mayors, 32 authors, 31 bank presidents, 17 editors and 17 legislators, 14 police surgeons, 13 missionaries, 12 dentists, 11 members of city councils, 9 pharmacists, 8 senators, 7 clergymen, 6 lawyers, 5 postmasters, 4 fire surgeons, 1 sheriff, 1 justice of the peace and 1 governor. One was a member of the U. S. Pharmacopeia and 1 was a member of the state board of agriculture. One had formerly served as a British vice consul.

"There were 19 who had served in the regular medical corps of the U. S. Navy, 17 served in the regular corps in the U. S. Army, 19 in the U. S. Public Health Service, 7 in the Veterans' Administration and 4 in the Indian Medical Service.

"Association Officers.—Among those who died, 1 had been President of the American Medical Association, 2 had been Vice President, 19 section officers and 4 members of councils. Thirty-nine had been members of the House of Delegates, 38 presidents of state medical associations and 4 secretaries. One hundred and eighty-seven were or had been presidents of county medical societies."



MUST OLD AGE MEAN *Feebleness?*

Weakness and infirmity are usually regarded as normal concomitants of senility, yet in many instances they need not develop. Examination of the diets chosen by many older persons discloses nutritional inadequacies which might readily account for weakness and poor physical endurance. In most instances such diets, chosen because thought to be "easier digested," are seriously deficient in essential nutrients.

New Improved Ovaltine is a rich source of the specific nutrients most likely to be lacking in the self-chosen diets of the aged. Hence it can be expected to be of real aid in the correction of many subclinical deficiencies. This delicious food drink is more easily digested than milk alone, hence rarely produces epigastric distress or abdominal discomfort. The three recommended daily servings contribute significant amounts of protein, calcium, iron, and the essential vitamins.

Three daily servings (1½ oz.) of New Improved Ovaltine provide:

	Dry Ovaltine	Ovaltine with milk*
PROTEIN	6.00 Gm.	31.20 Gm.
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FAT	3.15 Gm.	31.95 Gm.
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PHOSPHORUS	0.25 Gm.	0.903 Gm.
IRON	10.5 mg.	11.9 mg.
COPPER	0.5 mg.	0.5 mg.
VITAMIN A	1500 U.S.P.U.	2953 U.S.P.U.
VITAMIN D	405 U.S.P.U.	432 U.S.P.U.
VITAMIN B_1	300 U.S.P.U.	432 U.S.P.U.
RIBOFLAVIN	0.25 mg.	1.28 mg.

*Each serving made with 8 oz. milk; based on average reported values for milk.



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Ovaltine now comes in 2 forms—plain, and sweet chocolate flavored. Serving for serving, they are virtually identical in nutritional value.

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Physicians are invited to send for a supply of individual servings of New Improved Ovaltine. The Wander Company, 360 North Michigan Avenue, Chicago, Illinois.

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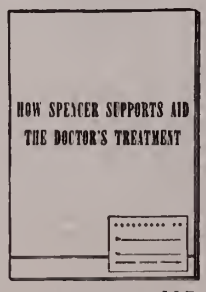
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FIND FEW SUGGESTIONS OFFERED FOR PREVENTION OF SEASICKNESS

Three Physicians Say A Review Of Literature Reveals Little Is Suggested Other Than Conservative Precautionary Measures

In a review of the literature on seasickness and other forms of motion sickness, Donald McEachern, M. D.; Guy Morton, M. D., and Peter Lehman, M. D., Montreal, Canada, declare in the current issue of *War Medicine,* published by the American Medical Association in cooperation with the Division of Medical Sciences of the National Research Council, that from the standpoint of prevention little is suggested in the literature other than conservative precautionary measures directed to "general fitness" and avoidance of dietary indiscretions.

They say that several writers have emphasized the importance of mental factors and strongly recommended that apprehensive persons be reassured that the malady is transient and is amendable to sound medication. Specific occupations, such as knitting, reading and deck games, were recommended by one group of writers while another one advised that the passenger inspect the ship prior to sailing and become accustomed to the ship and its odors.

"The importance of dietary indiscretions, such as farewell banquets, as predisposing factors was stressed by most writers," the three Montreal physicians state. "Various types of preparatory diets were recommended, whereas excessive use of alcohol or tobacco was discouraged. R. J. Blackham stated that temporary starvation will do no harm but that the patient's fluid intake must be maintained and recommends the use of stout, neat brandy and iced dry ginger ale.

"Most authors advised the person subject to seasickness to dress warmly and to avoid chilling. They were in general agreement that a person is less likely to become seasick if he lies supine with the head directed toward the center of the ship.

"R. A. Bennett claimed that warm salt water baths (90 to 95 F.) of half an hour to one hour's duration are of considerable preventive value and that as an actual therapeutic (treatment)

(Continued on page 40)



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SEASICKNESS (Continued)

measure they often produce permanent relief. The importance of sleep in the prevention of seasickness has been emphasized. . . ."

In the introduction to their paper, Drs. McEachern, Morton and Lehman say that "Although seasickness is as old as history, there is a remarkable conflict of ideas regarding its cause and absence of an adequate remedy for it. Much that has been written is in speculative vein, and facts are few and far between. Despite the universal and disabling character of the malady little effort has been made to study it scientifically. . . ."

As for the possible mechanisms of motion sickness, the three men say that it is probable that a number of factors operate together in the production of the usual state of motion sickness. From the work of several investigators it would appear that rapid acceleration and deceleration, especially up and down, is the main factor in the production of the condition.

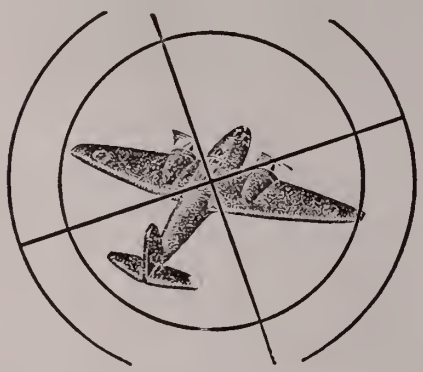
Individual ships have characteristic movements and rhythms and a person may become seasick on one ship and not on others. Some persons are more susceptible on large, others on small, ships. The periodicity of the ocean waves is also a factor. Neurotic and apprehensive passengers are universally accepted as being most susceptible to seasickness but it has been noted, however, that robust and stable persons may become badly affected.

Human beings susceptible to seasickness may become ill in fifteen to thirty minutes and more resistant subjects in about an hour.

"Acclimatization, or the development of sea legs," the three physicians say, "usually requires two to four days but may take several weeks. Such immunity, if it develops, may be specific for the movements of the particular ship involved. Thus, a person acclimatized on an ocean liner may fall victim to the movements of a lake or channel steamer, or he may lose his immunity and become ill on the same liner at a later date. . . ."

They say that several authors have recognized two types of seasickness, one said to be most

(Continued on page 42)



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SEASICKNESS (Continued)

common in men and the other in women. With men the main symptom is headache with discomfort; vomiting is unusual, but if present it occurs at long intervals and temporarily relieves the symptoms. In the type more common among women frequent vomiting is the rule, while headache is rare. In the majority of cases, however, symptoms seem to be intermediate between the extremes of the two types.

As for treatment, the authors say that in the mechanical field several writers have mentioned the use of various abdominal belts and supports with a view to reducing the mobility of the heavy organs in the abdomen (viscera) or the vein pressure changes in the abdominal vessels.

"Many authors," the Canadian physicians say, "claimed that rhythmic breathing in time with the ship's movements is a valuable measure. J. T. McIntosh informed us that in many personal experiments performed during channel crossings he satisfied himself as to the usefulness of the maneuver. His technic was to inspire (inhale) deeply and to press the lower part of the belly upward with the hands during the ship's upward movement. With the last downward movement of the ship forced expiration was made. This procedure became automatic after an hour or so."

Regarding drug treatment they say that most authors considered two types of drugs, those useful in depressing a certain part of the autonomic nervous system and those which act as sedatives to the entire body. Authors differed with regard to dosage, depending on their own experience. Drs. McEachern, Morton and Lehman say that their review of the articles on drugs made it clear that "the difficulties of assessing the value of any therapeutic agent are great."

In a note the three men add that a study was made recently of 38 instances of chronic seasickness in American naval personnel. The patients fell into two groups, those constitutionally sick, with history of car, bus and other kinds of motion sickness, with efficiency at sea extremely low, and those severely seasick without a history of motion sickness ashore, with a



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fair degree of efficiency at sea. They say the investigator suggested that those of the first type are not useful at sea and might be either discharged from the Navy or placed on shore duty. He felt that the other type will improve with time and treatment or with transfer to a larger ship.

PSYCHOLOGIC WARFARE ON CANCER

The last twenty-five years have witnessed important developments in the technic of applying recognized principles of psychology to education. The psychologic approach to the educational phases of the cancer problem has been pioneered by the medical profession. In the beginning physicians were fearful that detailed information concerning the signs and symptoms of cancer would create cancer phobias that would lead to mental distress and confusion.

For years we have preached that "unreasonable fear and pessimism about the curability of cancer has caused countless people to delay treatment and thus lose their best chance for a cure." Physicians have generally thought it unwise to dwell upon the seriousness of disease and to add to the miseries of the sick by approaching the bedside with a grave face and a pessimistic attitude. The bedside manner of the family physician determines his ability to quiet the fears of the patient, to minimize the seriousness of the situation, to extend hopefulness and cheerfulness, and to instill determination to recover from sickness.

Patients do not respond well if told the exact diagnosis. On the other hand, experience has shown that there are certain individuals who recover more quickly if they are given some definite information. Once the exact diagnosis is known, the individual members of the family bear the added burden, willingly and quickly, and unite in massing all their strength to help the patient recover from the disease. This is reflected in many ways—by encouragement, by visits to the bedside, by the offer of financial aid, and by other attentions to the patient's welfare.

(Continued on page 44)

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CANCER (Continued)

It is a well-known fact that cancer is the second highest cause of death in the United States. Heart disease, the leading cause of death, is rather gentle in its deadliness compared with cancer. The cancer patient proves a burden to the family and puts a strain on their emotions and financial resources. Cancer strikes one out of every ten people over the age of 40, and generally these are the people responsible for the foundation of the home. All of these facts and many more have been mentioned in cancer education but they have not been dramatized.

In the beginning of this second World War, it was believed that mass air raids and bombing of civilian populations would cause them to crack up mentally and physically. It was thought that the horror of sudden death would create hysteria and countless other manifestations of moral and physical disintegration. The British civilian population, Corregidor, and Malta have proved that attacks of this character strengthen resistance to the limit of endurance. History proves that the American public is capable of bearing burdens, and, in fact, the average American begins to fight only when he becomes conscious of catastrophe and some inward fear of defeat awakens him to the full responsibility of the situation. Many authorities have commented that "Pearl Harbor" was the best thing the Japanese could have done for America because it succeeded in unifying the nation and awakening us to our responsibilities. Factual information and the dramatization of danger have generally strengthened the physical and moral fiber of the race.

The war on cancer has not used all its weapons in the field of dramatization up to the present time, and consequently the public is not fully conscious of this dread disease. If the full dramatization of cancer as a killer is ever used to arouse the interest and determination of the public to fight this disease, it will be an entirely new weapon in cancer education.

The softness of life in the United States has created a certain complacency in our people that has tended to make us minimize all dangers to our security as a nation. We are still attempting to live and cling to our peace-time psychology. Facts and history have proved that we will never again be safe from attack until our

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enemies are conquered and controlled. The same facts are true of cancer, and there *is* reason to believe that this disease *can* be conquered and controlled by the united efforts of our people and the medical profession.—*Samuel Binkley, M. D., Medical Director, The American Society for the Control of Cancer. N. Y. State Journal of Medicine,* July 15, 1942.

WAR PARTICIPATION COMMITTEE STUDIES MEDICAL CARE PROBLEMS

Proposals For Solution Of Problem Will Be Submitted To Federal Officials By A. M. A. Group; Public Told How It Can Help

The problem of the provision of medical care in areas in which a shortage exists as a result of the movement of populations or physicians in connection with war activities was considered by the War Participation Committee of the American Medical Association in a meeting held at the Association's headquarters, 535 North Dearborn Street, Chicago. Policies and proposals for the solution of the problem are being submitted to proper federal authorities, it was announced.

The committee also authorized the release of a statement containing suggestions whereby the public can aid the medical profession in making the most efficient utilization possible of available medical services. The committee's statement is as follows:

"The War Participation Committee of the American Medical Association (including Drs. Walter F. Donaldson, Pittsburgh, Chairman; Edward R. Cunniffe, New York; Clyde L. Cummer, Cleveland; John H. O'Shea, Spokane, Wash., and William R. Molony Sr., Los Angeles, and as ex officio members, the President of the Association, Col. Fred W. Rankin, Washington, D. C.; the President-Elect, Dr. James E. Paullin, Atlanta, Ga.; the Chairman of the Board of Trustees, Dr. Roger I. Lee, Boston; the Secretary, Dr. Olin West, Chicago, and the Editor of *The Journal of the American Medical Association,* Dr. Morris Fishbein, Chicago) has given consideration to the problem of the supply of physicians for the armed forces, for industry, and for the need of our civilian communities.

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"While there does not seem to be an immediate shortage of physicians for the nation as a whole, the voluntary departure of some physicians from certain areas has created in those areas a special problem. With the armed forces rapidly expanding, the number of areas in which the available physicians will be at a minimum is likely to increase. In order to aid the best and most efficient possible utilization of available medical services, the War Participation Committee of the American Medical Association makes the following suggestions:

"1. Call the doctor to your home only when necessary. Go to his office when you can.

"2. Help the doctor to plan proper use of his time by calling him before nine o'clock in the morning whenever possible.

"3. Have an examination at the first sign of sickness. This helps to prevent long and serious illnesses.

"4. Some conditions are best treated in the hospital. Doctors can see more patients in the hospital in the same amount of time then elsewhere. Cooperate by providing in advance against the cost of hospitalization. Go to the hospital when the doctor recommends it.

"5. Have yourself immunized against smallpox and lockjaw. Make certain that all children are vaccinated aginst smallpox, diphtheria and lockjaw. When outbreaks of diphtheria or other infections threaten, cooperate with health officers and doctors in prevention.

"6. Avoid overeating, overdrinking, overworking and overexercising. Get a good diet. Follow the rules of personal hygiene.

"7. Women should take first aid courses and nurse's aid training courses of the Red Cross. This will help to relieve the burden on the physician and nurses in the hospital and in the home.

"8. Every doctor not already in the armed forces is probably doing extra work in industry, public health and in his private practice. Help him to conserve his health by avoiding any unnecessary responsibilities for him."

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To find anything one should look for it. Every case of tuberculosis found and put under treatment stops short of a possible source of spread of this disease whose ramifications are more widespread than a chain-letter. Every case of tuberculosis found in the early stage gives that person a much greater chance for recovery than if it is a late stage of the disease. J. L. Gompertz, M.D., Bull. Alameda Co. Tuber. and Health Assn., March, 1942.

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WARN AGAINST TONSILLECTOMY IN MONTHS WHEN INFANTILE PARALYSIS IS PREVALENT

A study of the case of five apparently healthy children in a family at Akron, Ohio, who, after their tonsils had been removed, developed infantile paralysis involving the muscles of breathing, with three of them dying, "emphasizes the danger of tonsillectomy during the months in which poliomyelitis is prevalent even though cases of the disease have not been recognized in the community," four investigators warn in *The Journal of the American Medical Association* for August 22. The study was made by Thomas Francis Jr., M.D., Ann Arbor, Mich.; Carl E. Krill, M.D., Akron; John A. Toomey, M.D., Cleveland, and Walter N. Mack, M.S., Ann Arbor. There were six children in the family but the sixth and youngest child was not operated on and remained well, although poliomyelitis virus was present in his stool.

NUMBER OF CITIES WITH NO DEATHS FROM TYPHOID IN 1941 INCREASED

A Significant Decrease In The Death Toll From This Disease Is Revealed In The 30th Annual Report By The Journal

There was a significant decrease in the death toll from typhoid in the large cities of the United States in 1941, it is revealed in the thirtieth annual report on such data, compiled by *The Journal of the American Medical Association* and published in its August 8 issue. Particularly noteworthy, *The Journal* points out, is the fact that while in 1940 there were twenty-four cities with typhoid death rates exceeding 1.0 per hundred thousand population, in 1941 there were only eleven such cities.

"The number of cities with no deaths from typhoid has decreased from thrity-nine to thirty-six," the report says. "There has occurred, however, a very significant increase in the number of cities with a death rate below 1.0 (from thirty in 1940 to forty-six in 1941) . . . there are but four cities with rates above 2.0 and one of these (New Orleans) reports all deaths among nonresidents. Twenty-five cities record no typhoid death in 1940 and 1941 . . . several other cities in the first rank would appear in the honor roll were they not charged with deaths among nonresidents.

"For the seventy-eight cities for which data are available since 1910 there occurred one hundred and twenty-three deaths from typhoid in 1941, which is the lowest on record (172 in 1940, 232 in 1939). The rate is now at a rate of about 0.33 per hundred thousand of population. For the ninety-three cities the number of deaths in 1941 is one hundred and forty-one (190 in 1940). The rate has decreased from 0.50 to 0.37. Of the one hundred and forty-one deaths in the ninety-three cities, sixty deaths (43 per cent) were among nonresidents. The health officers [from whom data for the report were obtained] report no special outbreaks of typhoid. . . . Lay consideration for the dangers of exposure to insanitation, especially when traveling, has doubtless had a salutary influence on the prevalence of typhoid. . . ."

Among the eight geographic divisions into which the country is divided in conducting the survey, the East North Central cities (population 9,386,378) have returned to first place, which rank they held temporarily in 1938. Of the eighteen cities included in this group, six reported no deaths during 1941. There were nineteen deaths in the group as a whole during 1941, and the death rate, 0.20 (0.35 in 1940), is the lowest rate thus far attained by any group of cities.

The fourteen New England cities (population

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2,579,152) continued to hold second place with a death rate of 0.23 (0.35 in 1940). There were six deaths reported in this group of cities, and eight cities reported no deaths in 1941.

The Middle Atlantic cities (population 13,129,185), in first place in 1940, were superseded in 1941 by both the East North Central cities and the New England cities. Thirty-one deaths were reported, and in eight of the eighteen cities there were reported no deaths from typhoid. The rate for this group of cities was 0.24, which is lower than the rate for 1940, 0.27.

The nine West North Central cities (population 2,716,484) were in fourth place in 1941, with a death rate of 0.29, as compared with 0.41 in 1940. There were eight deaths reported, with five cities recording no deaths from typhoid in 1941.

An increase from thirteen deaths in 1940 to sixteen in 1941 is reported by the Mountain and Pacific states (population 4,186,039). The rate has increased from 0.30 to 0.38. Among the eleven cities there were five which reported no deaths from typhoid in 1941.

Not one city in the six East South Central cities (population 1,286,747) recorded the absence of a death from typhoid. However, the death rate for 1941, 0.70, was significantly lower than that of 2.09 for 1940. There were nine deaths due to typhoid reported during the interval by this group of cities.

In the nine South Altantic cities (population 2,727,985) there occurred twenty-four deaths from typhoid in 1941. There was but one city without a death in 1941. The rate, 0.88, is higher than the rate for 1940, 0.73.

Although in last place among the geographic divisions, the eight cities of the West South Central group (population 2,048,692) report a decided reduction in the death rate (2.00 in 1940, 1.37 in 1941). The actual number of deaths was twenty-eight. There were three cities in this group without a death.

The report points out that it should be borne in mind that deaths recorded for each city included those among nonresidents as well as residents and that "it is apparent that some cities are far more liberal than others in their attitude in accepting for hospitalization cases of communicable disease from the neighboring rural areas. In some instances legal circumstances compel the city to accept cases from the county."

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Nutrition Research Laboratories announce a reduction in the price of Pendron, "The Complete Vitamin Arch," effective September 1st, 1942.

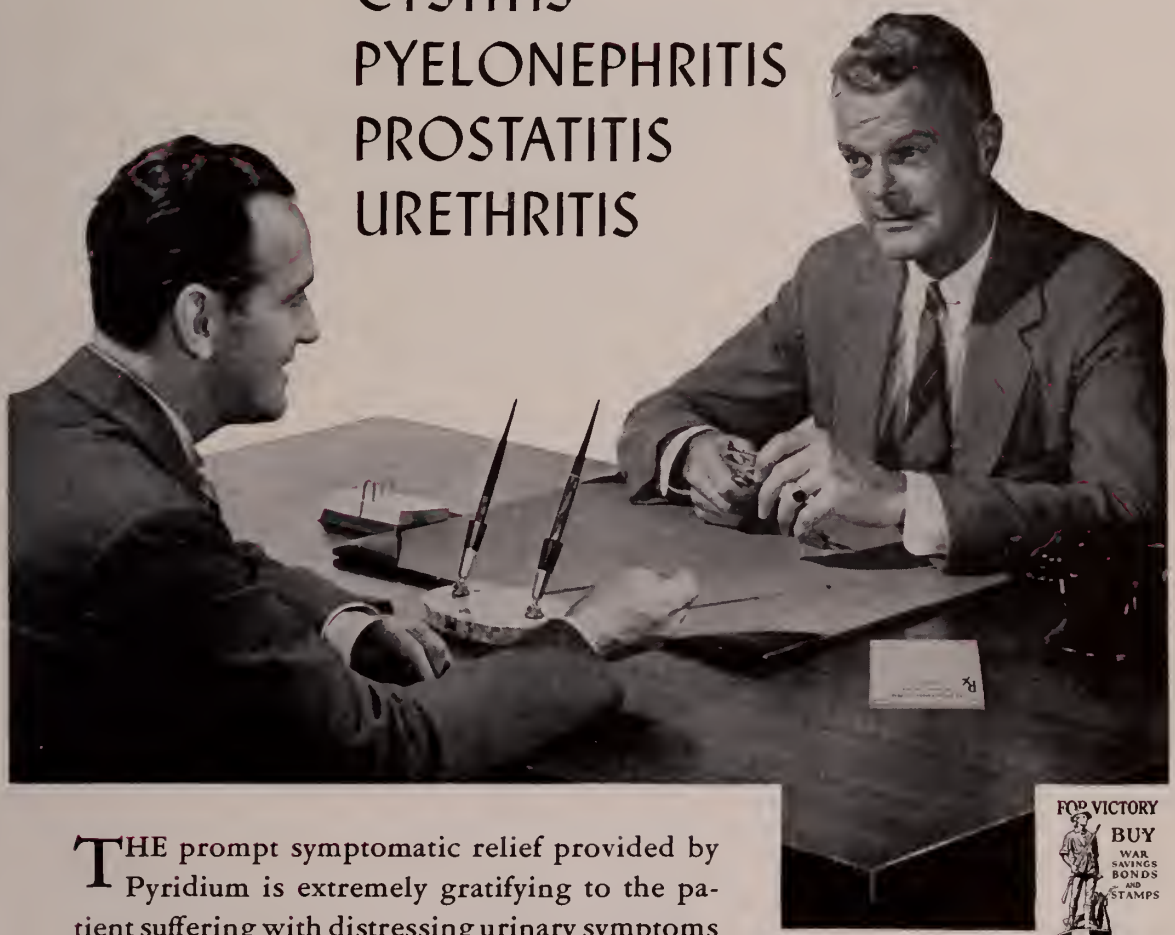
This price reduction has been made possible by the wide prescription of Pendron by the medical profession throughout the country and the reduction in production costs.

Nutrition Research Laboratories are manufacturers of Ertron — the high potency, activated ergosterol (Whittier Process) product for the treatment of arthritis — and Bezon — Whole Natural Vitamin B Complex.

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of distressing symptoms in

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THE prompt symptomatic relief provided by Pyridium is extremely gratifying to the patient suffering with distressing urinary symptoms such as painful, urgent, and frequent urination, tenesmus, and perineal irritability.

Conveniently administered perorally in the average dosage of *2 tablets t.i.d.,* Pyridium possesses a combination of advantages. It is relatively nontoxic, is effective in the presence of either acid or alkaline urine, is well tolerated, and has a local analgesic effect on the urogenital mucosa.

Literature on request

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More than a decade of service in urogenital infections

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One of the 14 Units in "Cottage Plan"

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The
ILLINOIS
Medical Journal

VOL. 82 NO. 4

October, 1942

THE N. I. AL... OF MEDICINE
OCT 2... 1942

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Improved Methods in the Diagnosis and Treatment of Protozoan Infections of the Intestine

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OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

Announcing

a supplemental aluminum therapy

Phosphaljel®

WYETH'S ALUMINUM PHOSPHATE GEL

Aluminum hydroxide gel is accepted therapy in the management of peptic ulcer . . . Its impressive record of effectiveness suggested the development of an alternate aluminum preparation to meet particular requirements in certain cases.†

Phosphaljel, Wyeth's Aluminum Phosphate Gel, was originated by Wyeth and was used experimentally in the first successful attempt to prevent postoperative jejunal ulcer in Mann-Williamson dogs. Some animals were allowed to develop Mann-Williamson ulcers and the effectiveness of Phosphaljel was further demonstrated when its administration was followed by prompt healing of these lesions in every case.[1]

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The suggested dosage of Phosphaljel is one, or occasionally, two tablespoonfuls every two hours during the active stage of the ulcer. Later in the course of management, three tablespoonfuls with meals and at bedtime or two tablespoonfuls six times daily with or between meals is recommended. Wyeth's Aluminum Phosphate Gel is supplied in twelve fluid ounce bottles and is available at all pharmacies.

†Phosphaljel is accepted for use in the treatment of peptic ulcer associated with a relative or absolute deficiency of pancreatic juice, diarrhea or a low phosphorus diet.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Pharmacy and Chemistry

Phosphaljel contains 4% aluminum phosphate and possesses antacid, astringent and demulcent properties analogous to those of aluminum hydroxide gel.

[1]*Fauley, G. B.; Freeman, S.; Ivy, A. C.; Atkinson, A. J., and Wigodsky, H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Int. Med. 67: 563-578 (March) 1941.*

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Entered as Second-class Matter July 21, 1919, at the Post Office, Oak Park, Illinois, under the Act of March 8, 1879. Acceptance for mailing at special rate of postage provided for in Section 1102, Act of October 8, 1917, authorized July 15, 1918. Office of Publication, 715 Lake Street, Oak Park, Ill.



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supplying the bland, demulcent, non-digestible bulk required for normal peristalsis

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(GREEN LABEL)

With ingested liquids, Metamucil forms a soft, plastic mucilaginous mass—lubricating and non-irritating—promoting normal peristalsis.

Adsorbs free gastric acids and protects the mucosa from food irritation.

Does not interfere with digestion or absorb oil-soluble vitamins.

Metamucil is a purified, concentrated vegetable mucilloid prepared from the seed of Plantago ovata (Forsk) and held in dispersion with an equal amount of a specially prepared dextrose.

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No initials

are set down

on prescriptions

for pharmaceuticals

more often . . .

none inspire

greater faith

in their merit

than . . .



Factors influencing success with **ERTRON** *therapy in Arthritis*



A clinical appraisal of the literature on ERTRON therapy to date again emphasizes the value of *Ertronization* in arthritis.

Some of the important points in management gathered from recent articles are the following:

SELECTION OF CASES . . . .

Reporting on 200 ERTRON-treated cases, Snyder, Squires, Forster, Traeger and Wagner (Indust. Med., 7:11, 295-316, July, 1942) found a higher degree of improvement in rheumatoid arthritis than in osteoarthritis. The rheumatoid type is by far the more common, but the clinician should keep this variation of results in mind when outlining therapy and prognosis.

TO ASSURE SAFETY . . . .

No toxicity was found in 98 cases reported by Steck (Ohio State M. J., 38:5, 440-443, May, 1942). As a precautionary measure, however, the dosage should be gradually brought up to the maintenance level (Snyder and Squires: New York State J. Med., 41:23, 2332-2335, Dec. 1, 1941).

ADEQUATE DOSAGE . . . .

The necessity for adequacy of dosage in ERTRON therapy is to be noted. The consensus of opinion is that a maintenance dosage of 6 capsules daily (occasionally more) should be continued for six months or longer, unless considerable improvement occurs within a shorter period.

ADJUNCTIVE THERAPY. . . .

In a clinical study of over 300 cases, it was pointed out that each patient presents a separate and distinct problem (Farley, R. T., Spierling, H. F. and Kraines, S. H.: Indust. Med., 10:8, 341-352, August, 1941), and must be treated nutritionally, psychologically and physically to obtain maximum benefit.

ERTRON*

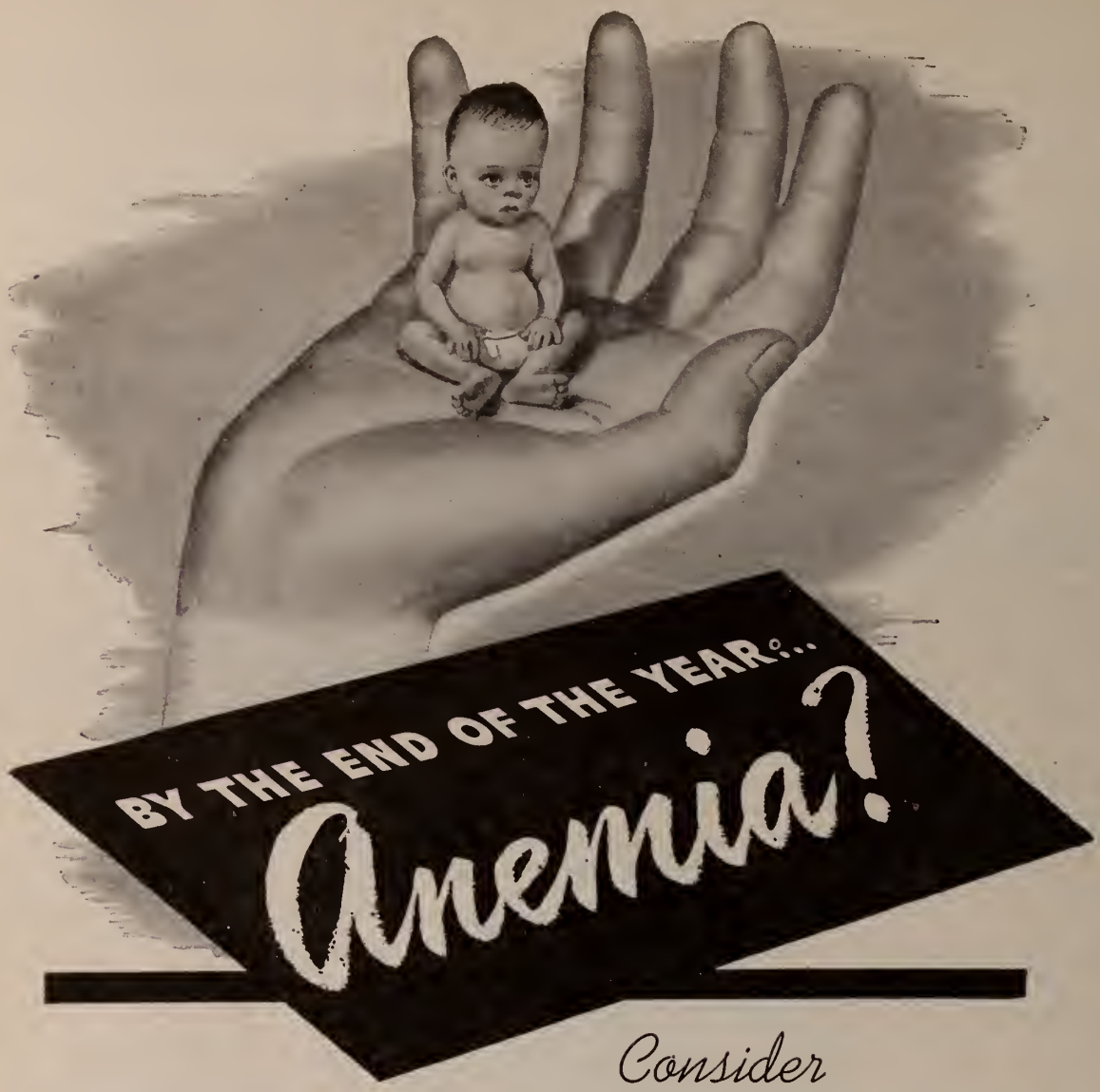
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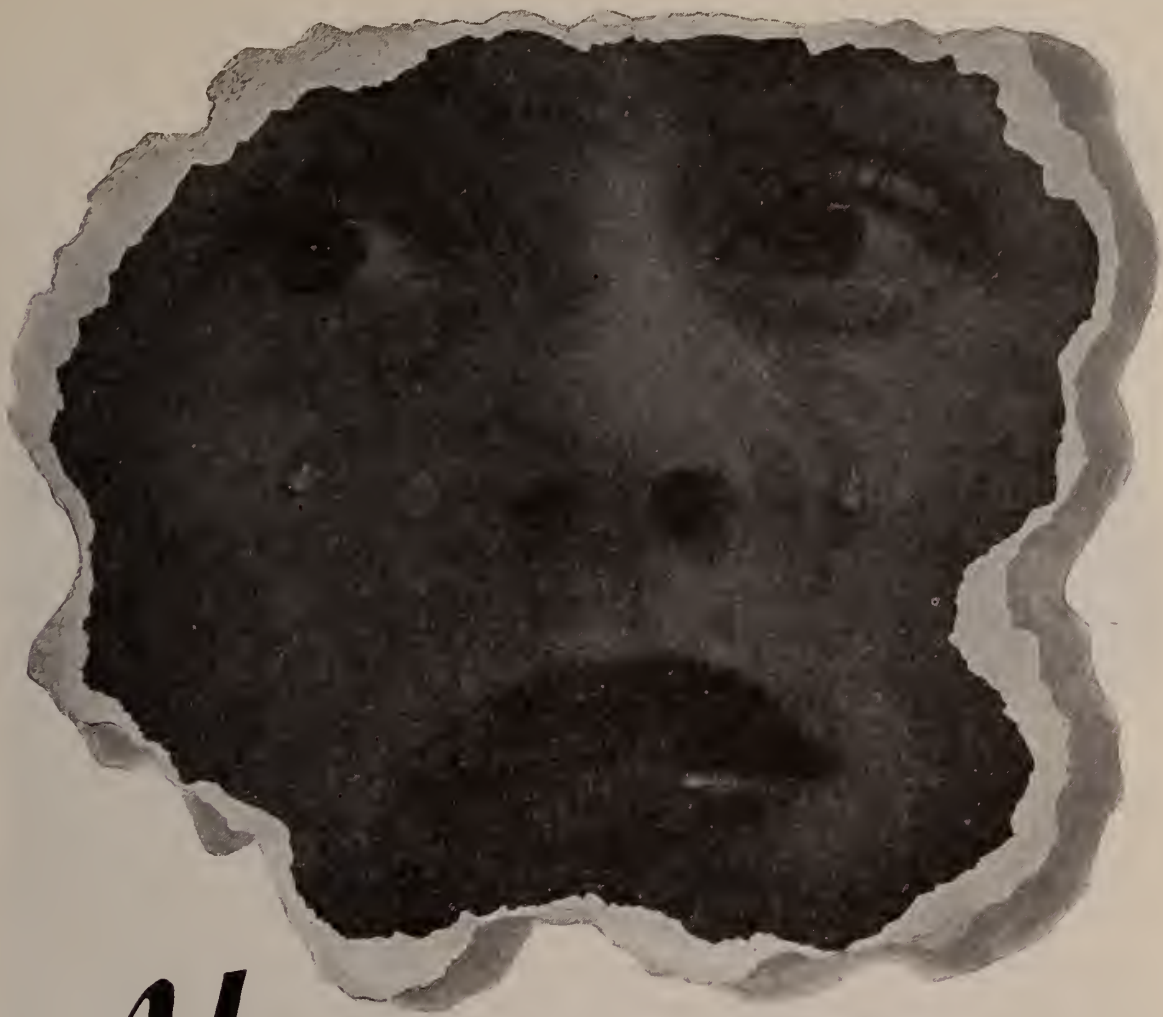


The value of including liver extract with iron in treating secondary anemias in young children as well as adults has been demonstrated.[1] In addition to the changed blood picture, patients' appetites improve, irritability disappears, activity and alertness increase, and there is a rapid gain in weight. In such cases Hematinic PLASTULES with Liver Concentrate are of therapeutic value. Each Plastule contains the equivalent of 52½ grains of fresh whole liver. The iron content is 2.5 grains of dried ferrous sulfate U.S.P.X. per Plastule. Suggested dosage—2 PLASTULES three times daily. Supplied in bottles of 50, 100 and 1000.

1. Maurer, S., Greengard, J., and Kluver, C.: "The Value of Liver Extract and Iron in the Anemia of Young Infants." J.A.M.A. 98:1069:1932.

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UNPREDICTABLE EMOTIONS

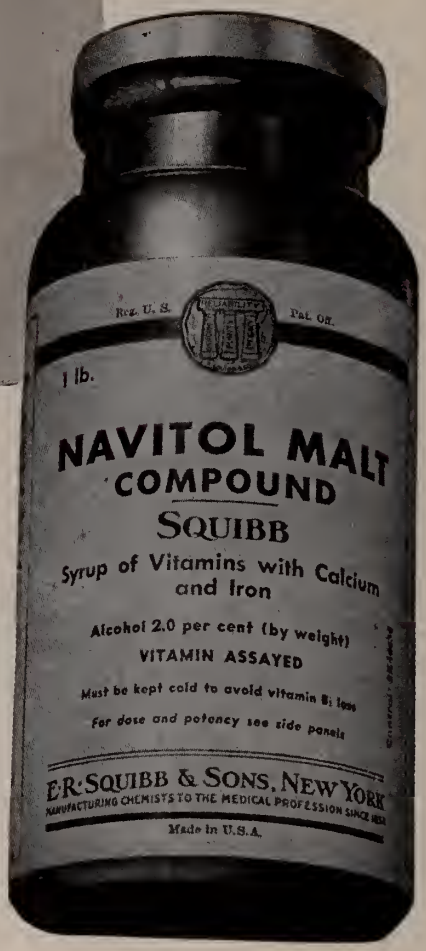
Premenstrual tension—the cyclic alteration in the personality of a woman that may occur ten to fourteen days before the onset of menstruation—has been characterized by Israel (J.A.M.A., 1938, 110:1721) as a "dire and foreboding sensation of indescribable tension" which makes the woman feel that she "would like to jump out of her skin." During the premenstrual period the quiet, mild woman may become a restless, irritable creature subject to unpredictable emotional outbursts, fits of crying, insomnia, headache, dizziness and other disturbing symptoms. Gratifying effective relief is usually assured by the administration of Progestin (progesterone 'Roche-Organon') or Progestoral (pregnenine-lone 'Roche-Organon'). The usual dose is 1 mg of Progestin intramuscularly or 5 to 10 mg of Progestoral orally each day during the last seven or eight days of the menstrual cycle. In the many cases of premenstrual tension associated with dysmenorrhea in normally developed women, Progestin or Progestoral therapy will usually relieve both conditions with equally dramatic effectiveness.

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Vitamin A	5000 U.S.P. XI units
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Vitamin C	30 milligrams
Thiamine Hydrochloride	1 milligram
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Navitol Malt Compound is indicated especially in growing children; pregnant or lactating women; run-down or malnourished children and adults; patients with prolonged or wasting illnesses; and those on certain restricted therapeutic diets.

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TO THEM IT WAS A "LIMB"

IN the plush and gilt homes of these mid-Victorians a leg was a "limb", and constipation, "biliousness", for which the proper cure was a strong "physic". That they managed to survive and reach ripe ages is a tribute to their innate robustness.

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CETRO-CIROSE is a palatable sedative expectorant effective in the relief of coughs due to colds. As it contains no sugar, it obviates upset stomach and its pleasant taste is agreeable to children.

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Each fluid ounce contains

Codeine Phosphate	½ grain
Warning: May be habit forming.	
Chloroform	2½ minims
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Potassium guaiacolsulfonate	8 grains
Sodium Citrate	18 grains
Citric Acid	6 grains

in a palatable base.

*CETRO-CIROSE is a registered trade mark of John Wyeth & Brother, Inc., for its palatable and well balanced preparation for the relief of coughs due to colds.

CETRO-CIROSE is available in pint bottles.

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Will smallpox continue to decline in 1942?

SMALLPOX VACCINE

Lederle

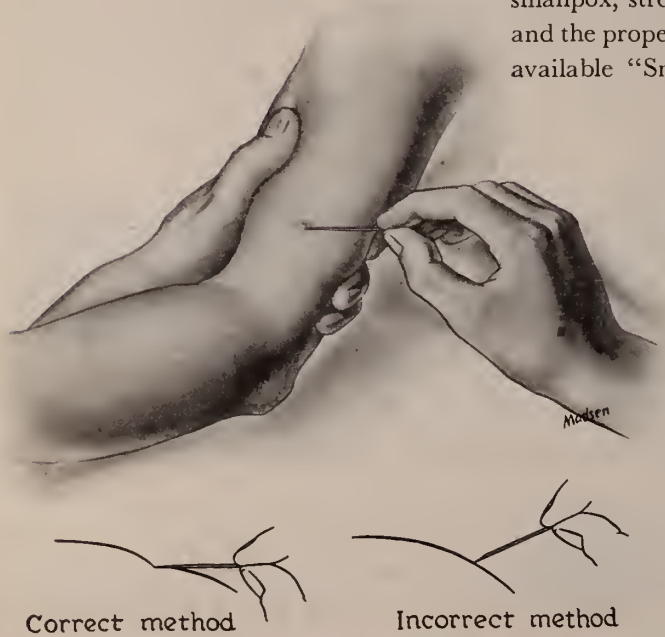
THE new "low" in smallpox incidence reached in this country in 1941 compares most favorably with the perennially high incidence reported in previous years:[1]

	1941	Median 1936-40
SMALLPOX.....	1,368	9,574

However, we are still far too tolerant of this dangerous disease.

To avert the possible increase in the incidence of infectious diseases, which history has shown is fostered during war time, our government recently made the commendable move of advising the immunization of all children over 6 months of age against smallpox. The success of this program, however, depends on the cooperation of every practitioner, public health official and local governing body alike.

TOOMEY,[2] in a recent analysis of active immunity in smallpox, stressed the integrity of the immunizing agent and the proper technique of vaccination. Lederle now has available "Smallpox Vaccine *Lederle*" which has been further improved by the addition of Brilliant Green (reducing the bacterial count of the virus). The "take" with this product is quite satisfactory and its viability has not been diminished as compared with glycerinated vaccine cured without the dye.

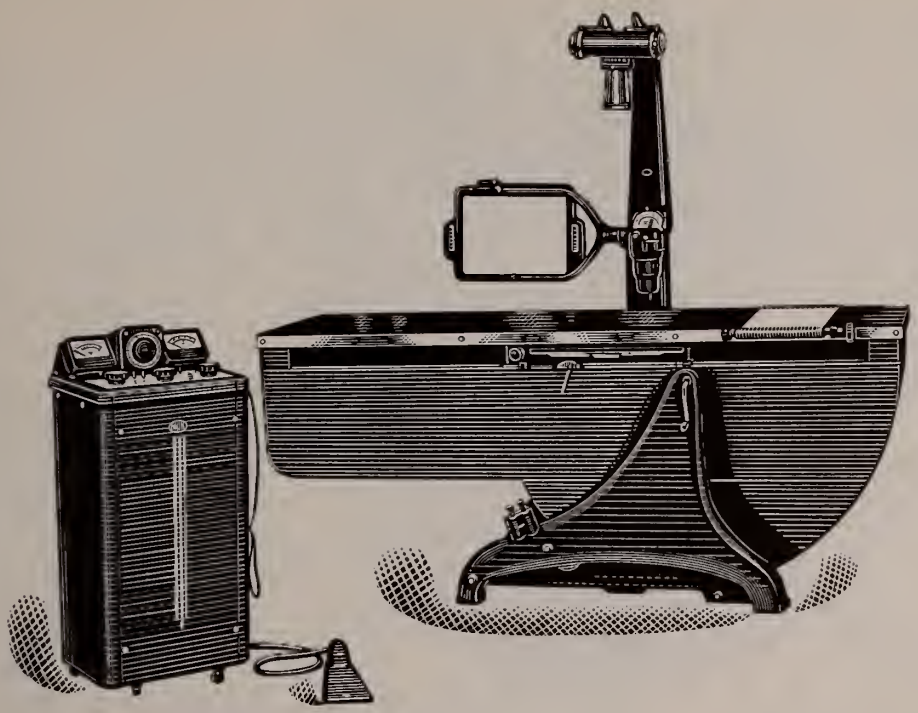


[1]Pub. Health Rep. 57:23,24 (Jan. 2) 1942.
[2]TOOMEY, J. A.: J. A. M. A. 119:18 (May 2) 1942.

PACKAGES
"Smallpox Vaccine *Lederle*" (U. S. P.)
1, 5 and 10 vaccinations
"Smallpox Vaccine *Lederle*" (Preserved with Brilliant Green)
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Supplied in glass capillary tubes, with sterile steel needle for each vaccination.

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2. It is nutritionally complete.

3. Easier for the mother to prepare."

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* * *

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**The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941*
J.A.M.A., 93:1110—October 12, 1929
Brückner, H.—Die Biochemie des Tabaks, 1936

★

"THE CIGARETTE, THE SOLDIER, AND THE PHYSICIAN," The Military Surgeon, July, 1941. Reprint available. Write Camel Cigarettes, Medical Relations Division, 1 Pershing Square, New York City.

Camel THE CIGARETTE OF COSTLIER TOBACCOS

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Ciba Pharmaceutical Products, Inc. salutes the medical men of today in the armed forces of the United States as well as those in civilian forces responsible for health "behind the lines."

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C · I · B · A

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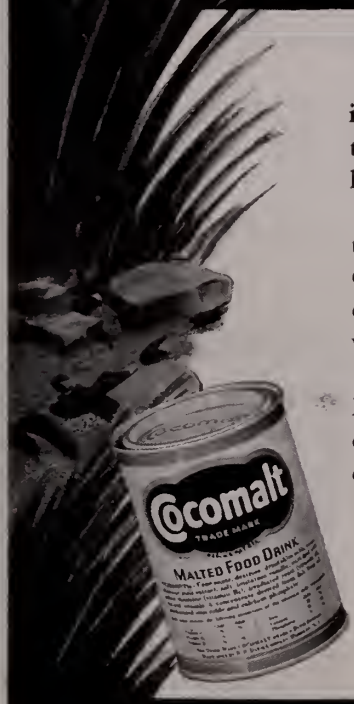
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Flush the bile ducts—but more, aid fat digestion! *Dehydrocholic* acid induces the liver to excrete more thin bile than any other known agent. *Desoxycholic* acid chiefly assists in the emulsification and absorption of fats and fats-soluble vitamins by the small intestine.

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The Illinois Medical Journal

October, 1942
VOL. 82, NO. 4

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

"WHEN A LITTLE KNOWLEDGE IS A DANGEROUS THING"

During recent years many popular magazines have featured articles written by non-medical people on medical subjects which frequently are an elaboration of preliminary reports by physicians who have been doing experimental work on the particular subject. In the majority of instances no actual claims have been made by the members of the medical profession regarding the merits of the treatment under discussion.

September Reader's Digest published an article by Mr. Paul de Kruif entitled: "Found — A One Day Cure for Syphilis" in which the writer states that "now there actually is promise of a one day cure." In the article the reader is led to believe that the standard methods requiring a minimum period of 18 months are too painful, too dangerous and require too much time to satisfy the average individual having the disease. Reference was made to experimental work with fever therapy in early syphilis in which cases were treated with the induction of fever to 106 degrees for a period of ten hours. Reference was made to the dangers of arsenical therapy, this no doubt based on articles published some ten years ago. Physicians know that with the present day treatment with modern, standardized preparations of arsenicals and the heavy metals, the reactions are now rarely seen.

In a recent article by Lehmann* the treatment of syphilis in the U. S. Army is outlined as handled by the urologic service. All patients in the early infective stage are hospitalized until the condition becomes non-infectious. "Treatment for early syphilis is standardized so that the optimum requires continuous treatment with alternating courses of thirty each of arsphenamine and bismuth injections for one year, with clearance only after the serologic reactions of blood and spinal fluid have become and remain negative for a year. On completion of the optimum treatment the patient is followed up at frequent intervals."

Lehmann states: "the technic of massive dose arsenotherapy of early syphilis by the intravenous drip method has not been adopted by the Army." The Army, therefore, has not adopted the so-called "five day" or "ten day" treatment by the continuous intravenous drip method, which has been used rather extensively in hospitals and clinics and is still considered as being in the experimental stage.

The article in Reader's Digest will no doubt cause much embarrassment to many physicians whose patients have been required to take the generally approved forms of treatment, and no doubt some of them will develop the idea that their physician is not entirely up to date and they may seek further advice from a "modern" up to the minute physician willing to use the "new" method promising a one day cure.

Some months ago another article appeared in Reader's Digest assuring quick relief to sufferers

*"Dermatology in the Army" by C. F. Lehmann, M.D., Lt. Col. U. S. A., Journal, A. M. A., August 29, 1942.

of "athlete's foot" through the application of a 50% mixture of phenol and camphor. Recent issues of medical journals have reported cases of dermatitis venenata resulting from the use of this mixture and many pharmacists have reported that individuals who read the article have requested them to sell the mixture so highly recommended.

Reader's Digest is undoubtedly one of the most popular of the many modern magazines and it will be found no doubt, in the waiting room of many physicians. It is possible that patients awaiting the regular treatments for syphilis may read the article written by Mr. de Kruif while waiting for their turn to see their physician. In such instances more time of the busy physician must be consumed giving the proper explanation to his patient.

The principal criticism which seems desirable is that such magazines as Reader's Digest should either have a medical editor to review all material submitted on medical subjects, or should have a provision whereby all articles of this type which are reprinted would be referred to a capable physician for a critical evaluation such as is given today to the many articles submitted to medical journals for publication.

THE SCRAP CAMPAIGN

Everyone knows that America is at war, and that this is an all-out affair. We need not only man power, but must have the materials from which war materials are made in sufficient quantity to rout the enemy. American industries have undertaken this big job, but they must have not only the available supply of crude ore, but also the millions of tons of waste scrap to be found throughout the country.

Steel to go into planes' tanks, guns and ships to win the war can be made in large quantity if the American people will all get back of this scrap campaign, and turn in all available metal to be found in or around their homes. Likewise much scrap is still available if looked for, in

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the form of old or unused rubber, twine, tin, bronze, burlap and other critical materials so essential at this time.

Every community should organize a scrap campaign, beginning with an educational program and further the effort to find the supplies in the home, workshop, on the farm, and elsewhere. Many old factories have much metal which can be salvaged. Plants partly or completely destroyed by fire are frequently the source of much salvage material, old pipes, castings, and machinery, which can never be used otherwise.

Places should be made available in every community where these bits of scrap material can be taken, and in cases where larger amounts of scrap are available, trucks should be at the disposal of those responsible for the campaign, which can go to the various places and get this valuable material.

Throughout the country, in parks, around court houses, and elsewhere there are thousands of old cannons of earlier wars, which can be utilized to good advantage in this campaign. Many tons of old iron fence, which can be easily replaced by a more modern type, should be made available. Street car tracks and interurban lines, which have been abandoned, can be torn up and utilized in the manufacturing of modern machines of war.

The American Industries Salvage Committee has recently released 10 suggestions for getting out industrial scrap which should be given wide publicity.

1. Head up the campaign by appointing an able executive of the company armed with authority to act.

2. Use posters, illustrations, pay envelope stuffers, and all other means to enlist all employees in scrap campaigns.

3. Comb plant and yards for dormant scrap and usable and abandoned equipment.

4. Survey all plant equipment, particularly idle, standing or discarded machines.

5. Classify and segregate scrap and supervise its handling.

6. Make each foreman responsible for preventing spoilage and waste in his department.

7. Report promptly equipment which is obsolete. If equipment has not been used in three months, and it can't be proved that it will be used in the next three, turn it over where it can be used or scrap it.

8. Salvage usable parts from equipment marked for scrapping.

9. Speed return of scrap to mills and refineries through existing channels. Report regularly on collections of scrap to the Industrial Salvage Committee set up by the War Production Board in your community.

10. Enforce monthly re-checks in every department to find scrap materials previously overlooked.

These suggestions may well be considered by the households of America to good advantage, for it is quite apparent that the surface has not yet been even scratched, when it comes to utilizing the actually available scrap material which is dormant throughout the country.

Physicians' offices and homes are likewise good sources for much scrap material, old lighting fixtures, pipes, burned out grates, or fire boxes from furnaces, and even the stock of old and useless keys, which can be found in every home will be of material aid in this first national salvage campaign.

NO CERTIFICATION OF PROSTITUTES

At the meeting on June 9th, 1942 at Atlantic City, the House of Delegates of the American Medical Association passed a resolution which will greatly aid in the fight against venereal diseases by placing the medical profession on record against the medical inspection and certification of prostitutes. The resolution was introduced by Doctor George Kosmak, a leading physician of New York City, well-known to the profession as the editor of the American Journal of Obstetrics and Gynecology. The Reference Committee to which the resolution was referred reported it favorably to the House of Delegates with the following statement:

"Your reference committee is completely in accord with the provisions of this resolution and recommends its adoption. It is inconceivable that any reputable physician should so degrade his profession and himself as to issue certificates to prostitutes, to the effect that they are free from venereal disease. This is a baneful practice which encourages the maintenance of vice and may do incalculable damage by giving false as-

surance of safety and lead to an appreciable increase in venereal disease. Moreover, it tends to nullify the efforts of the duly constituted authorities, Federal, State and local, to deal with the problems of prostitution by law enforcement and other accepted methods.

"Your reference committee wishes only that it were gifted with the power of expression to emphasize more strongly its approval of the spirit and intent of the provisions of this resolution."

It will be noted that the American Medical Association declares that "physicians who knowingly examine prostitutes to give them medical certificates to be used in soliciting were participating in an illegal activity and violating the principles of accepted professional ethics."

Unfortunately, the type of physician who makes a practice of examining and certifying prostitutes is unlikely to be restrained, by ethical considerations, from aiding the prostitution racket by issuing certificates of one sort or another to help prostitutes lure customers. For the restraint of these unethical doctors laws similar to those of New Jersey and Oregon, should be on the statute books of every state now lacking such provisions. Such laws prevent flagrant practices such as the issuance of certificates over a doctor's signature stating that an individual has been examined by the signator on such and such a date and was found free from "venereal disease" or from "any infectious diseases." Such certificates formerly were common and they were sometimes issued by quack doctors without the formality of any examination whatever.

Nowadays this same type of doctor, sometimes guided by an equally unscrupulous lawyer, avoids the legal obstacle by giving prostitutes whom he may or may not examine a card or slip of paper stating that their blood was tested for syphilis on such and such a date and found "negative." Prostitutes assure prospective patrons that this means certain freedom from venereal disease — and the popular over-emphasis on the alleged infallibility of the blood test for syphilis often leads to acceptance of a negative serological report as a guarantee of freedom from syphilis and maybe gonorrhea as well.

Prostitutes are quick to take advantage of anything which they may use to indicate that they are healthy. They often call themselves waitresses and so obtain food handlers' health cards. They use venereal disease clinic registration cards to support a claim that they are examined regularly by health department doctors. A prostitute-inmate of a brothel, in a city near which a great camp is situated, showed an investigator how she convinces skeptics who fear infection. She offered what she claimed was a "health card" as proof of freedom from venereal disease. The card she had in her possession apparently was a treatment record which had been issued by the local health department. It bore the rubber stamped signature of the city health officer, and in chronological order listed the bismuth treatments she had received to date. These she palmed off on customers as "shots" of a serum used to immunize one against syphilis. Rather cleverly she stated: "Just like boys in the Army are innoculated against smallpox . . . this stuff is given to us to prevent syphilis. . . ."

In recent years local authorities in many cities have compelled prostitutes to be photographed and fingerprinted and examined periodically for venereal disease. In some communities the authorities insisted that the prostitute visit certain physicians; in others the girls were permitted to choose their own doctors. In either case the police required prostitutes to have "health certificates." Thus in a large measure the authorities created a condition which led some ethical as well as many unethical practitioners to issue venereal disease certificates. With the better enforcement of state laws and local ordinances especially since the declaration of war, these practices have greatly diminished.

It is suggested that each state should by law prohibit the issuance by physicians, health officers, or by anyone else, of certificates of freedom from venereal disease to any prostitute or to anyone for the purposes of prostitution; that physicians, health officers and clinic directors should take precautions to prevent prostitutes or others engaged in the prostitution racket from gaining possession of and making use of cards, reports or records for purposes of prostitution. This subject is considered worthy of the attention of medical societies, especially at present when prostitution and venereal diseases are serious problems for the armed forces and for war industries.

Correspondence

CONFERENCE ON VENEREAL DISEASE

The Conference on Venereal Disease Control Needs in Wartime will be held at the Arlington Hotel, Hot Springs National Park, Arkansas, October 21-24, 1942 under the auspices of the U. S. Public Health Service in conjunction with the Eighth Annual Meeting of the American Neisserian Medical Society. The tentative program follows.

October 22, 10 A.M. — Session I

Veneral Disease Control Measures Influencing the War Effort

Welcome Address — Surgeon General Thomas Parran

1. Rehabilitation of Selectees with Syphilis and Gonorrhea — Lt. Col. Richard H. Eanes, Asst. Dir., Medical Division, Selective Service System
2. Present Venereal Disease and Prostitution Problems as They Relate to the Army — Lt. Col. T. B. Turner, Director, Venereal Disease Control Division, Preventive Medicine Service, United States Army
3. Present Venereal Disease and Prostitution Problems as They Relate to the Navy — Captain C. S. Stephenson, In Charge, Division of Preventive Medicine, Bureau of Medicine and Surgery, United States Navy
4. The Contribution to the War Effort of the Subcommittee on Venereal Diseases, National Research Council — Dr. J. E. Moore, Baltimore, Md.
5. Private Physician Support of the Wartime Venereal Disease Control Program

October 22, 2 P. M. — Session II

The Epidemiology of Syphilis and Gonorrhea — 1942

1. The Epidemiology of Gonorrhea as a Stimulus to Prostitution Repression — Dr. Donald H. Williams, Medical Director, Division of Venereal Disease Control, Provincial Board of Health, Vancouver, B. C.
2. Improvement of Present Methods for Extra Familial Contact Tracing — Miss Mary A. Burke, Consultant in Social Hygiene Nursing, Detroit Department of Health
3. Difficulties in Case Holding of Selectees Infected with Syphilis — Dr. G. Foard McGinnes, Director, Division of Venereal Disease Control, Tennessee State Department of Health
4. Defects in the Present Follow-up Program — Lida J. Usilton, Principal Statistician, Division of Venereal Diseases, U. S. Public Health Service
5. The Male Investigator in Venereal Disease Control Follow-up — Dr. Malcolm H. Merrill, Chief, Bureau of Venereal Diseases, California Department of Public Health

October 23, 9:30 A. M. — Session III

Eighth Annual Meeting, American Neisserian Medical Society

1. The Control of Venereal Disease Among Industrial Workers — Surgeon Otis L. Anderson, Assistant Chief, Division of Venereal Diseases, U. S. Public Health Service
2. Organization and Management of Clinics in a State Gonorrhea Control Program — Dr. F. W. Caudill and Dr. R. E. Teague, Kentucky State Department of Health
3. Gonococcal Culture Methods — Dr. Charles M. Carpenter, School of Medicine, University of Rochester
4. Management of Gonorrhea in the Male — Dr. P. S. Pelouze, University of Pennsylvania, Philadelphia
5. Management of Gonorrhea in the Female — Dr. Robert M. Lewis, Yale University School of Medicine
6. Hyperpyrexia in Chemoresistant Gonorrhea — Dr. Stafford L. Warren, School of Medicine, University of Rochester

General discussion of the above panel led by Dr. Nels A. Nelson, Director, Division of Venereal Disease Control, Maryland Dept. of Health, and Dr. Adolph Jacoby, New York City Health Department

October 23, 2:00 P. M. — Session IV

Eighth Annual Meeting, American Neisserian Medical Society

1. Gonococcus Cultures as a Public Health Service — A Preliminary Report — Captain Daniel Bergsma, Venereal Disease Control Officer, Headquarters, First Army, Governor's Island, N. Y.
2. President's Address — Assistant Surgeon General R. A. Vonderlehr, Division of Venereal Diseases, U. S. Public Health Service
3. Gonorrhea from the Standpoint of the Army — Captain Ernest B. Howard, Venereal Disease Control Officer, Fourth Army Corps Area, Atlanta, Ga.
4. Gonorrhea from the Standpoint of the Navy — Captain C. S. Stephenson, In Charge, Division of Preventive Medicine, Bureau of Medicine and Surgery, United States Navy
5. Resumé of the Year's Research in Gonorrhea — Dr. Alfred Cohn, Department of Health, New York City
6. The Role of Organized Medicine in the Control of Gonorrhea — Dr. Robert S. Breakey, Lansing, Michigan

October 23, 2:00 P. M. — Demonstration

Technics of Modern Serodiagnostic Tests for Syphilis

October 24, 9:30 A. M. — Session V

Wartime Venereal Disease Control Education

Program

1. The Relationship between the Programs of Venereal Disease Control Education and the Repression of Prostitution
   a. From the point of view of public health — Dr. George M. Leiby, Director, Division of Preventive Medicine, Louisiana State Department of Health
   b. From the point of view of social protection — Mr. Charles P. Taft, Assistant Director, Office of Defense Health and Welfare Services
   c. From the point of view of the public — Mr. Capus Waynick, Director, Demonstration of Public Health Education Measures in the Control of Venereal Diseases, Raleigh, N. C.
2. The Venereal Disease Control Education Program in the Armed Forces
   a. Army — Major William A. Brumfield, Venereal Disease Control Division, Preventive Medicine Service, U. S. Army
   b. Navy — Captain C. S. Stephenson, In Charge, Division of Preventive Medicine, Bureau of Medicine and Surgery, U. S. Navy
3. The Current Status of Venereal Disease Education — Surgeon General Thomas Parran, U. S. Public Health Service

October 24, 2 P. M. — Session VI

Research Influencing the Wartime Venereal Disease Control Program

1. Progress in Investigations of the Intensive Therapy of Syphilis — P. A. Surgeon Harry Eagle, U. S. Public Health Service Syphilis Research Center, Baltimore, Md.
2. New Serologic Tests for Syphilis and Their Demonstrated Efficiency — Dr. Arthur H. Sanford, Mayo Clinic, Rochester, Minn.
3. Progress in the Wartime Management of Gonorrhea — Dr. P. S. Pelouze, University of Pennsylvania, Philadelphia
4. Relationship between Venereal Disease Control and the Joint Army and Navy Committee on Welfare and Recreation — Brigadier General F. H. Osborn, Chief of Special Service, United States Army
5. Problems Involved in the Adaptation of Recent Scientific Discoveries to the Wartime Control of the Venereal Diseases — Dr. John H. Stakes, University of Pennsylvania, Philadelphia

October 21, 2 P. M.

Technics of Venereal Disease Education

1. Introductory comments — Assistant Surgeon General R. A. Vonderlehr, Division of Venereal Diseases, U. S. Public Health Service
2. Presentation of a Typical Venereal Disease Education Problem for Discussion by Panel and Conference

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GREETINGS AUXILIARY MEMBERS — FROM YOUR PRESIDENT —

Vacations are over and our activities are waiting; let us think seriously of our auxiliary work.

With this thought in mind, may I extend to you assurance of most hearty cooperation throughout the coming year. I trust we will keep well informed by reading and studying the aims and objectives of our Auxiliary, read the Auxiliary Bulletin, Illinois State Journal, and the American Medical Journal.

Convention Pledge We pledged our Auxiliary to assist Dr. E. H. Weld, President of the Illinois State Medical Society, and a pledge to cooperated with the sale of Defense Stamps and Bonds. I urge every county to share in these activities. The sale of Bonds and Stamps typifies the good will of all organizations and the people of our Country. We are to help and never fail our men who are risking all they hold dear.

Membership The increase of membership in our Auxiliary is the responsibility of every member in the Auxiliary. This cooperation will

build up our State figures. If we, the members of this Auxiliary, will keep abreast as to the aims and objectives, we will prove that we are the strongest ally to medicine. Why? Because we are alert to the welfare of our doctors and the Auxiliary.

Benevolence Fund Benevolence work is another objective of the Auxiliary. As members and wives of physicians, this should be one of our first contributions of the year and we ask the wives of all physicians to share in this, our great work. Years pass on, and time with memories is all that is left for those who never said, nay. May we add comfort and joy in the closing of their years.

Extra Activities Red Cross, First Aid, Nurse's Aid, and Nutrition Programs all come under the national emergency. Do not fail to cooperate at all times. Remember the boys who are in the camps near your County — help to keep them happy; they, who have but one thought, to keep our Flag flying and our Country safe for democracy.

May I announce at this time, all our Officers and Chairmen have ready the year's plans and will be happy to serve you.

I, too, pledge my promptness,

Sincerely yours,

HILDA B. WANNINGER, President,
Woman's Auxiliary to the
Illinois State Medical Society

THE BULLETIN

It is the plan of the National Board to use the OFFICIAL PUBLICATION to present important material to the members of the Woman's Auxiliary to the Medical Society.

All issues of the BULLETIN will contain programs and information which will aid in the promotion of Auxiliary projects. I urge each member to subscribe to this publication so that she may be well informed of the activities throughout the country.

Yearly subscription $1.00.

State Bulletin Chairman,
Mrs. John Soukup,
10754 Lafayette Ave.,
Chicago, Illinois.

Mrs. W. J. Wanninger,
President.

PUBLIC RELATIONS PROGRAM

The following program has been recommended for the States use. We hope you will be able to do as much of the plan presented as will apply to your County, and your local needs.

(1) Promotion of health education among lay groups by disseminating accurate health data through speakers from Medical groups and the Illinois State Medical Speakers Bureau, also health exhibits and the distribution of health literature in meeting places.

(2) Familiarize members of the Auxiliaries and through them lay groups with the achievements of American Medicine, past and present.

(3) Cooperate and give practical help to child and maternal health care or any plans pertaining to the advancement of child health.

(4) Promotion of nutrition programs, presenting authentic information. Auxiliary members can and should assume leadership in this field, for the increased interest of the public in demanding a program that is free from fads and fancies and is accurate, gives Auxiliaries a rare opportunity.

(5) Cooperate in all forms of National Defense.

(6) Promotion of nurses aids groups on National scale Auxiliaries.

(7) Practical assistance to the families of the physicians in army corps.

(8) Interest in Pan American Medical Unity.

Your responsibility for a perfect "Public Relations Day" will be to extend a welcome to all lay organizations, Presidents and health chairmen who look to the dvancement of health education, it is the duty of all members to cooperate and have a successful "Public Relations Day."

All Public Relation work must be approved by your County President and advisory committee.

Please feel free to ask for further information.

Sincerely yours,
(Mrs. V. M.) Blanche M. Seron
State Public Relations Chairman

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

We are in the midst of rationing various essentials necessary to an all out war program and to the maintenance of civilian requirements. To say that rationing is in somewhat of a mess would probably be a frank and mild statement.

The medical profession is essentially interested in the rationing of doctors for the care of our armed forces and the maintenance of our civilian health. It appears that Procurement and Assignment is making some progress but there are many problems yet confronting them, particularly regarding the problem of essentials. Under the present set-up and from various statements made, the army will require about 58,000 doctors for an army of 10,000,000 men. This figures out roughly one doctor to about every 173 men in the army. It is estimated that there were 145,000 doctors engaged in the practice of medicine at the outset of the war. This would leave a balance of 87,000 doctors to care for approximately 120,000,000 people on the home front or approximately one doctor for every 1,379 people. The question arises as to whether this rationing is well founded — speaking from my own experience in World War I it would seem to me, without any question, that the number of physicians in the unit I was attached to was far in excess of the needs. There were a number of physicians in that unit who did very little work during the period they were attached to the unit. To say it quite bluntly, there were about one-third of the physicians who did practically all of the work. There were a number who did practically nothing as far as rendering service to the army. This, of course, was not their fault but rather the fault of the Commanding Officer and the higher ups in charge of medical service. In the past few months, I have taken the time to talk with a number of physicians, who were in World War I relative to this matter, and their opinion coincides fairly well with mine.

At the present time in the United States there is one physician for about every 880 people, and as a whole I do not believe that doctors are over worked. Necessarily they divide into various groups, those having more than they should do, those who do a fair amount of work, and a large number with plenty of time to spare.

Procurement and Assignment has attempted to place men where they are best qualified to work, and I think in this particular work they are to be commended for actually accomplishing something that was not accomplished in World War I.

It would seem obvious that with most of these physicians being well trained and accustomed to handling a large practice that they will render a better and more efficient service than was rendered in World War I, and that this can be accomplished with a ratio of doctors to the army of less than the present quoto. The older men in the profession and perhaps a certain number that are less well trained and less adapted to the care of a large number of patients are left with the care of the entire civilian population. Of the older men who are better trained and already accustomed to caring for a large practice will have the largest number of additional patients because they are already leaders in their community. The problem is how long will they be able to maintain the high pressure that will be set for them in taking care of the civilian population.

I would not attempt to say what number of physicians should be required for an army of 10,000,000 — obviously the army heads are in a much better position for that, and I assume that it is determined on the basis of previous wars and the present war. I think we are all agreed that there is considerable bungling in the war in all of the various departments, that make up a vast program, and that it takes a considerable period of time to reach any fair degree of efficiency in a hastily prepared war program and in a hastily developed army. It is possible that such might be the case in the medical department.

Again, reverting to doctors who saw active service in World War I. It is generally reported by them that they did not work nearly as hard as they did in private practice. Obviously there are marked exceptions to this rule depending on the type of work they were engaged in and the location of their particular unit. Many units were over worked and under went many hardships but generally speaking this was probably far from the rule.

In the final analysis the rationing of doctors is not unlike the rationing of other necessities for war efficiency and production. The best example of sound judgment is that of Mr. Jeffers, newly appointed head of Rubber Conservation, who stated that while we must conserve the produced rubber for the armed forces we must not lose sight of the necessity of keeping the cars of the United States rolling on rubber both for the transportation of necessities of war purposes and civilian purposes but also for the transportation of workers to various production plants. In other words, the army can accomplish very little unless we can produce the things that the army needs for the prosecution of the war, and therefore rationing must not be allowed to be too lopsided.

The rationing of labor also presents a problem between the production of our agricultural necessities and the production in our factories of the various war products. It is obvious that the farmers cannot compete in wages with the factories under the present system. Labor has placed great emphasis on their patriotism and loyality to the government in the part they have played in turning out our war material, and yet if one follows closely the program of labor it is quite evident that in a large number of instances their contribution has meant no particular sacrifice but rather an increase in wages with little or no inconvenience to themselves. They have made the just claim that the increase cost of living entitled them to an increase in wages, and yet there seems to be sufficient proof that their pay and their time and a half has more than off set their increase cost of living.

At the present time we have a great controversy over ceiling for farm products and ceilings for labor wages, and that these ceilings must be established if we are to prevent inflation. At this time there appears to be little in common between the agriculturals interest and the labor interest as to the solution of this problem. We cannot deny the fact that there are problems that are difficult to settle and that eventually the government has to use a firm hand in the establishment of these ceilings and in the rationing of labor between agricultural and industry for the proper prosecution of our war efforts. It is the general feeling that there is a definite effort to delay final action in many of these matters until after the fall election despite the President's statement that unless the congress established a farm ceiling by October first that he would do it himself. Perhaps if he had also asked congress to establish a ceiling on wages by that date they would have been a more general approval of his statement because it is obvious that one cannot be accomplished without the other. While it is true that he stated that after congress had established the farm ceiling he would establish a labor wage ceiling — it left considerable doubt as to what that ceiling would be, and naturally a controversy must arise because the ceilings should be established at one and the same time.

It is now estimated that we have 2½ million people on the federal payroll with innumerable bureaus that are not at all correlated at the present time. We are largely interested in the war effort and again the problem of rationing is in evidence as evidenced by the fact that we have one federal employee for every four soldiers if we mass an army of 10,000,000 men. If the need for man power is what we are led to believe it is at the present time, in the actual prosecution of the war, it might not be out of place to consider the re-rationing of federal employees

so that they might be placed where they will actually make some definite contribution to the war program instead of a liability in the form of increased taxation to support them, and somewhat disgruntle public at their inactivity in a real emergency.

R. K. Packard, M.D., Chairman
Committee on Medical Economics.

1943 ANNUAL A. M. A. SESSION CANCELED

"The American Medical Association will not hold its ninety-fourth annual session, scheduled to convene in San Francisco in 1943," *The Journal* of the Association announces in its September 26 issue. The editorial on the action by the Association's Board of Trustees explains that: "This is the third time in the history of the Association that an annual session has been canceled. In 1861 the session was postponed for a year because of the outbreak of the war between the states, and in 1862 it was again postponed for a year because of the demands of the war on the medical profession. The House of Delegates, the Board of Trustees, the scientific councils and the officials of the Association will be called into session to deal with the affairs of the Association, particularly the many wartime responsibilities being borne by the medical profession.

"The tremendous demands on the medical profession of the United States in association with the war, including the provision of physicians for the armed forces, for the care of veterans, for industry and for the care of the civilian population, has caused the Board of Trustees of the American Medical Association to give special consideration to problems associated with the holding of the session.

"The annual session of the Association with the attendance usually assembled on such occasions would take away from medical practice at the time from six to ten thousand doctors, together with many persons in associated professions concerned with the Scientific Exhibit, the Technical Exhibit and other features. The demands on the time of physicians are already innumerable. Moreover, the holding of the session in San Francisco would involve transportation in large part from other sections of the country, calling particularly on the railroads and also on all other means of transportation.

"The Board of Trustees has given special attention to statements issued by the Office of Defense Transportation, the War Department, the Navy Department and other governmental agencies concerning the holding of conventions.

"The primary consideration involved particularly relating to the annual session is the call that would be made on the time and work of physicians. Already the utmost that the medical profession can do to provide medical services for the Selective Service System, the Army, the Navy, the Public Health Service, industry and the civilian population is in some places being severely strained. These demands will no doubt be intensified by next June.

"While the Scientific Assembly and the Scientific and Technical exhibits will not be held in 1943, the many significant problems of the medical profession occasioned by the war, particularly such as concern the provision and distribution of physicians and the provision of medical service, are of such moment that the House of Delegates, the Board of Trustees, the various scientific councils and officials will be called into session in June 1943. This meeting will be held in Chicago in order to place the minimum stress on the time of the physicians concerned and on the transportation facilities of the nation.

"In making these decisions the Board of Trustees has kept in mind the solemn obligation entered into by the House of Delegates and the Board of Trustees of the American Medical Association to give to the nation every possible contribution that the Association can make to aid the war effort."

I am glad I have the four attributes for longevity: low blood pressure, low basal metabolism, low pulse rate — and a low sense of humor!

"What this country needs," said our postoperative patient, after reviewing the bill, "is a good five cent scar!"

"Violent exercise after forty," says *Dr. M. O. Rouse* of Dallas, "is especially harmful if you do it with a knife and fork!"

Medicine's Role in the War Effort

DR. SEELEY TRANSFERRED FROM PROCUREMENT AND ASSIGNMENT SERVICE

The Directing Board of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians has formally expressed its appreciation of the services rendered by Col. Sam F. Seeley, who has been transferred to military duty. Following is the text of the resolution adopted:

The transfer of Lieut. Col. Sam F. Seeley from his connection with the Procurement and Assignment Service to active military duty causes a great loss. Colonel Seeley, who has acted as executive officer since the beginning of this service, has been transferred to military duty, which is in keeping with the policy recently adopted by the War Department. His training and experience with the Medical Corps of the Army in his professional capacity amply justifies such a step.

The Directing Board of the Procurement and Assignment Service wishes to take this opportunity of expressing to the Surgeon General of the United States Army its very deep appreciation for the valuable service which Colonel Seeley has rendered during its period of organization and functions.

The Directing Board expresses to Colonel Seeley its deep appreciation for the great sacrifice which he has made in dislocating himself from actual military duty to serve with us in an executive capacity. He has been most unselfish and has given unstintingly of his time, energy and patience in helping to solve many of the problems connected with the functioning of the Procurement and Assignment Service. He has not only labored faithfully at our office in Washington but he has traveled over the United States, contacting many of his professional confrères and explaining to them the purpose for which the Procurement and Assignment Service was organized. His services have been most valuable and have helped to take us a long way in accomplishing the objectives for which it was created.

The Directing Board expresses to Colonel Seeley its gratitude and thanks for his unselfish devotion to the organization of the Procurement and Assignment Service and wishes for him the greatest success in his new assignment.

Frank H. Lahey, M.D., Chairman.
Harvey B. Stone, M.D.
Harold S. Diehl, M.D.
James E. Paullin, M.D.
C. Willard Camalier, D.D.S.

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MEMORANDUM FOR ADMINISTRATORS OF HOSPITALS APPROVED FOR INTERNSHIPS AND/OR RESIDENCIES

The directing board of the Procurement and Assignment Service has addressed the following memorandum to the administrators of all hospitals approved for internships and/or residencies:

The directing board has appointed the following hospital administrators to serve on an advisory Committee on Hospitals: Dr. M. T. MacEachern, associate director, American College of Surgeons, Chicago, chairman; Dr. Claude W. Munger, director, St. Luke's Hospital, New York; Dr. Benjamin W. Black, medical director, Alameda County Institutions, and superintend-

ent, Alameda County Hospital, California; Dr. Lucius Roy Wilson, superintendent, Hospital of Protestant Episcopal Church, Philadelphia, and Dr. Basil C. MacLean, director, Strong Memorial Hospital, Rochester, N. Y., and president, American Hospital Association.

This committee has recommended, and the directing board has approved, the following procedures and criteria to be used in preparing the revised lists of essential hospital staff members:

The many changes which have occurred in appointments of hospital interns and residents on or about July 1 and the urgent need of the armed forces for young medical officers make necessary at this time a revision of the lists of essential personnel on hospital staffs. Believing that you will prefer to make voluntary reductions in your staff, we ask for your fullest cooperation in our effort to assist you in maintaining your minimum essential staff.

Each hospital administrator has a definite responsibility to provide the necessary medical services for the patients of his hospital. In many hospitals, particularly those which care for charity patients and which are affiliated with medical schools, the retention of a minimum resident staff is essential both for the care of the patients and for medical education. Nevertheless, it is obvious that drastic reductions in the peacetime staffs of hospitals must be made if the needs of the armed forces are to be met.

Analysis of the original lists of essential personnel in hospitals indicates that in many institutions further reductions can and should be made. In preparing these lists the attitude should be not "How many can we possibly retain?" but "How many can we possibly release for service with the armed forces?"

1. In compiling lists consider only full time staff members, part time staff members conducting essential hospital services (e. g. roentgenologist), visiting staff members who actually conduct ward work, residents and interns.

(a) Residents should be considered essential on the basis of general hospital work and not because of the service they render in the care of private patients, except as it contributes to their training.

(b) Individuals who have completed one year of internship shall be considered available for military service unless they are appointed to an essential position as a hospital resident.

2. Do not consider visiting or courtesy staff members who serve only private patients. Their essentiality will be determined by the local Procurement and Assignment committees on the basis of their services to the community as a whole rather than their need in any particular hospital.

3. The residency program must be drastically curtailed and the number of residents decreased in numbers.

4. Subsequent to July 1, 1942 and during the war emergency, designation of a man as an essential hospital resident or fellow should not exceed two years beyond the completion of one year's internship.

5. Having determined the minimum number of essential positions, these positions should be filled as far as possible by:

(a) Women.

(b) Young men physically ineligible for military duty and older men.

6. Visiting staff members should be asked to contribute additional hours to their duties in the hospital.

7. Routine work of residents and interns should be delegated as much as possible to qualified nonmedical personnel for clerical, laboratory and other services.

8. One copy of the revised hospital list should be sent to the state chairman of the Procurement and Assignment Service and one copy to this office within one week of the receipt of this letter. A sample form for this report is enclosed.

9. It is important that every hospital staff member be informed by the hospital as to classification as essential or available, subject to approval by the Procurement and Assignment Service.

10. Your continued cooperation in this effort on the part of the Procurement and Assignment Service to provide medical personnel for the armed forces and at the same time to maintain essential hospital services during the war will be appreciated.

A blank is provided on which hospital administrators are requested to furnish full information regarding all staff members.

CRITERIA FOR DETERMINATION OF ESSENTIAL PHYSICIANS IN INDUSTRIAL MEDICINE

The situation regarding recruitment of physicians now employed in industrial medicine has caused the directing board of the Procurement and Assignment Service to send the following memorandum to all state chairmen relative to the methods by which the essentiality of physicians engaged in industrial medicine may be determined:

A serious situation is developing in some states because physicians under 45 years of age who are essential in their present positions as key men in industrial practice are being declared available by state chairmen or are being approached directly by recruiting boards with instructions to apply for a commission in the Army Medical Corps.

The Selective Service System and the Surgeon Generals of the Army and of the Navy are cooperating with us to keep at their posts the physicians declared to be essential by our state committees. In determining essentiality, please be guided by the following criteria, which have been recommended by the Committee on Industrial Health and Medicine and have been approved by the directing board.

In some instances an industrial physician under 37 years of age will be deemed essential according to these criteria, and yet you may think he should be made available. In this case it is your responsibility to obtain a replacement and to notify the central office at once when the industrial physician will be available.

A physician employed in industry is deemed to be essential when the following conditions exist:

A. Full time industrial physician.

1. The physician is employed by an industry which is manufacturing war materials exclusively or under priority ratings, and

2. The physician gives his full time to the industry or forty or more hours weekly, has been so employed for at least two years, or is especially trained for that purpose and is carrying on an acceptable health maintenance program and

3. The physician is performing the function of a medical director or department head or of a specialist or is the only physician employed.

4. Assistant physicians who perform routine functions under direction and are employed on a full time basis are deemed essential until they can be replaced within a reasonable time (three to six months).

B. Part time industrial physician.

1. The physician serves part time two or more industries engaged exclusively in the manufacture of war materials or under priority ratings, provided his total part time service is the equivalent of forty or more hours weekly. Note: The physician who serves on call only is not deemed to be essential.

C. The physician serves a state industrial hygiene bureau on a full time basis.

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POLICIES GOVERNING INITIAL APPOINTMENT OF MEDICAL OFFICERS

The Surgeon General of the Army published detailed information concerning policies governing the initial appointment of physicians as medical officers on April 23, 1942. Necessary changes are given wide publicity, at his request, in order that the individual applicants, and all concerned in the procurement of medical officers, may know the status of such appointments.

The current military program provides for a definite number of position vacancies in the different grades. The number of such positions must necessarily determine the promotion of officers already on duty and, in addition, the appointment of new officers from civilian life. Such appointments are limited to qualified physicians required to fill the position vacancies for which no equally well qualified medical officers are available. Such positions calling for an increase in grade should as far as possible be filled by promotion of those already in the service and not by new appointments.

If this policy is not followed, it would definitely penalize a large number of well qualified lieutenants and captains already on duty by blocking their promotions which have been earned by hard work. In view of these facts it has been deemed necessary to raise the standards of training and experience for appointment in grades above that of first lieutenant.

With this in view, the Surgeon General has announced the following policy, which will gov-

ern action to be taken on all applicants after Sept. 15, 1942:

All appointments will be recommended in the grade of first lieutenant with the following exceptions:

Captain.—1. Eligible applicants between the ages of 37 and 45 will be considered for appointment in the grade of captain by reason of their age and general unclassified medical training and experience.

2. Below the age of 37 and above the age of 32, consideration for appointment in the grade of captain will be given to applicants who meet all of the following minimum requirements:

(a) Graduation from an approved medical school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years' residency in a recognized specialty.

(d) An additional period of not less than two years of study and/or practice limited to the specialty.

3. Eligible applicants who previously held commissions in the grade of captain in the Medical Corps (Regular Army, National Guard of the United States, or Officers Reserve Corps) may be considered for appointment in that grade provided they have not passed the age of 45 years.

Major.—1. Eligible applicants between the ages 37 and 55 may be considered for appointment under the following conditions:

(a) Graduation from an approved school.

(b) Internship of not less than one year, preferably of the rotating type.

(c) Special training consisting of three years' residency in a recognized specialty.

(d) An additional period of not less than seven years of study and/or practice limited to the specialty.

(e) The existence of appropriate position vacancies.

(f) Additional training of a special nature of value to the military service, in lieu of the foregoing.

2. Applicants previously commissioned as majors in the medical Corps (Regular Army, National Guard of the United States or Officers Reserve Corps) whose training and experience qualify them for appropriate assignments may be considered for appointment in the grade of major provided they have not passed the age of 55.

Lieutenant Colonel and Colonel.—In view of the small number of assignment vacancies for individuals of such grade, and the large number of reserve officers of these grades who are being called to duty, such appointments will be limited. Wherever possible, promotion of qualified officers on duty will be utilized to fill the position vacancies.

Much misunderstanding has arisen concerning recognition by specialty boards and membership in specialty groups. It will be noted that mention is not made of these in the preceding paragraphs. This is due to the variation in requirements of the different boards and organizations. Membership and recognition are definite factors in determining the professional background of the individual but are not the deciding factors, as so many physicians have been led to believe.

The action of the grading board, established by the Surgeon General in his office, is final in tendering initial appointments. Proper consideration must be given such factors as age, position vacancies, the functions of command and original assignments. All questionable initial grades are decided by this board. Owing to the lack of time, no reconsideration can be given.

There are in the age group 24-45 more than a sufficient number of eligible qualified physicians to meet the Medical Department requirements. It is on this age group that the Congress has imposed a definite obligation of military service through the medium of the Selective Service Act. The physicians in this group are ones needed now for active duty. The requirements are immediate and imperative. Applicants beyond 45 years may be considered for appointment only if they possess special qualifications for assignment to positions appropriate to the grade of major or above.

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RESTRICT SALE OF ALL QUININE

The Health Supplies Branch of the War Production Board called attention, August 17, to the fact that all stocks of quinine and totaquine,

no matter how small, have been subject to the restrictions of Conservation Order M-131 since June 19.

Prior to that date, stocks of 50 ounces or less could be freely sold. Since June 19, retail druggists and all other sellers have not been permitted to sell quinine or totaquine for any purpose except as an antimalarial agent. The order extends to powder, capsules, solutions, pills and tablets and to quinine or totaquine stocks of all other descriptions whether or not packages have been opened.

The same sales restrictions apply to cinchonine, cinchonidine and quinidine, which are covered by Order M-131-a. No stocks of these may be sold except as an antimalarial agent and, in the case of quinidine, for the treatment of cardiac disorders.

The branch stresses that these drugs are urgently needed for military antimalarial use. Supplies are limited since their raw material source, cinchona bark, comes in most part from Java.

Druggists and pharmaceutic and proprietary manufacturers may not use their stocks of quinine or other alkaloids of cinchona bark in the manufacture of products which are designed for other than permitted purposes. These restrictions extend as well to dispensing of the drugs on physicians' prescriptions.

The practical effect of these regulations as far as manufacturers are concerned is to prohibit the use of their stocks in the manufacture of products such as elixir of iron, quinine and strychnine phosphates, coryza tablets and other formulas designed for treatment of other than malarial ailments. However, any such products which were manufactured prior to the effective date of the order controlling the particular drug involved may be sold without restriction.

Druggists having stocks of quinine, cinchonine, cinchonidine and quinidine in excess of their requirements for the permitted uses are urged to return the drugs to their source of supply.

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CHICAGO GROUP ON ACTIVE DUTY

Thirty-seven physicians, mostly at present or formerly associated with St. Luke's Hospital, Chicago, were commissioned in the United States Army Medical Corps in July and ordered to report for duty at an air corps medical unit in a western state. The following are members of this group: Majors James W. Clark, Percy J. Ross, Fred E. Ball, Claude N. Lambert, John I. Brewer and Robert E. Williams; Capts. Willis G. Diffenbaugh, John H. Pribble, Howard W. Merideth, Chester Coggeshall, Robert G. McMillan, William L. Waskow, Leslie R. Grams, George A. Ingrish and Paul H. Dube; Lieuts. LeRoy E. Walter, Claude R. Snead, Frank W. Jones, Joseph A. Davis, William Burgett Smith, Clarence Kristiansen, John B. Case, Carl H. McLauthlin, John T. Parker, Don J. Hunter, Frank R. Gondek, Lawrence De Renne, Robert C. Lawson, Ryland A. Buckner, Thomas G. Hobbs, Hosmer T. Merrell, Stephen C. Scott and Richard Oliver. Lieuts. J. S. Clark Jr., Francis S. North and Brendan P. Phibbs were ordered to report to Carlisle Barracks, Carlisle, Pa., for training before joining their units elsewhere.

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UNITED CHINA RELIEF COMMITTEE

The president of the Chicago Medical Society, Dr. Oscar Hawkinson, has appointed a committee to represent the medical profession in the Cook County, Ill., campaign for the United China Relief. This committee, comprising Drs. Frank P. Hammond, chairman, Wilbur E. Post, James G. Carr, George W. Post and James H. Hutton, in appealing for funds, points out that doctors, nurses and medical technicians have been the backbone of the famous and unique "American Expeditionary Force in China" and have been credited with sustaining Chinese morale and defeating Japanese propaganda through five years of war in China. Money is desperately needed at once, the committee says. Checks should be made out to United China Relief, Inc., and mailed to this committee at the offices of the Chicago Medical Society, 30 North Michigan Avenue, Chicago.

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TWO DOCTORS APPOINTED FOR WAACS

The War Department recently announced the appointment of two "on contract" surgeons for the Women's Army Auxiliary Corps now stationed at Fort Des Moines, Iowa. They are Dr. Mary L. Moore of Rifle, Colo., and Dr. A. Elizabeth Garber of Chicago. Secretary of War Stimson said at a press conference recently that the WAACs eventually would have women doc-

tors assigned to them full time but that, while the corps is getting its full strength, appointments would be on a contract basis.

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AVIATION MEDICAL EXAMINERS

A routine course of instruction to qualify army medical officers for duty as aviation medical examiners recently began at the School of Aviation Medicine, Randolph Field, Texas. The following officers were enrolled from Illinois:

Edward G. Cada, Captain, Berwyn.
William W. Curtis, 1st Lieut., Chicago.
Louis S. Frank, 1st Lieut., Chicago.
Dominic J. Haftkowski, 1st Lieut., Chicago.
Edgar O. Hughes, 1st Lieut., Washington.
Walter S. Miller, Captain, Rockford.
Theodore C. Papermaster, 1st Lieut., Chicago.
Jack L. Restibo, 1st Lieut., Chicago.

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MEDICAL AND SURGICAL RELIEF COMMITTEE OF AMERICA

This committee, with headquarters at 420 Lexington Avenue, New York City, has in the last two years furnished supplies valued at $466,815.95 to needy hospitals, evacuation centers and welfare organizations in the United States, Alaksa and Hawaii, to Russian relief groups, to the British Red Cross, to the American Friends Ambulance Unit in China and to the Free French. At the annual meeting of the executive board of the committee in New York on August 19 Dr. Joseph P. Hoguet, national medical director, said that the greatest demand had been for medical and surgical instruments, antitoxins, vitamin concentrates and the sulfonamide drugs. In view of the increasing number of the physicians who serve on this committee who have gone into the military service, plans are being made to form a group of nonprofessional men and women to supplement the work of physicians affiliated with the committee. Efforts also are being made to increase the present professional membership of the committee from 415 to 600 by the end of the coming fiscal year. In a news release the committee acknowledged contributions of drugs and instruments from numerous organizations throughout the country, including medical societies, hospitals, woman's auxiliaries, clinics, pharmaceutic houses and other manufacturing companies.

CONSERVATION OF MEDICAL SUPPLIES

The medical profession and the hospitals of the nation will shortly be obliged to depend upon dealers' stocks of medical and hospital supplies if they are to maintain their present level of efficiency. The continued shortage of raw materials makes it increasingly evident that even the armed forces may have difficulty in securing their requirements. Stocks on the shelves of the dealers of this nation constitute the only reserve of medical and hospital equipment which may be available in the near future to meet civilian needs. The hoarding and dead storage of equipment and supplies for a possible emergency should, therefore, be discouraged. Any unexpected emergency could be met by our present civilian medical and hospital resources; continued disaster could only be met by the utilization of military stores which would be made available if there were urgent need.

Any surplus or obsolete equipment now in the possession of physicians and hospitals ought not to be dispersed at this time, because of the difficulty of replacement and the possibility that it may be needed for the establishment of emergency base hospitals.

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PARACHUTES TO DROP DOCTORS AND NURSES

Regional Director J. M. Loughlin of the first civilian defense area recently announced the formation of a parachute corps to drop doctors and nurses to stricken areas in out of the way places. The corps was organized by the Civil Air Patrol in New England under the direction of Major R. S. Fogg, regional commander of the Civil Air Patrol, on the rolls of which already are twenty-five doctors and thirty nurses, some of whom own their own airplanes, according to the Boston *Globe*.

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At the end of the fifth round, the heavyweight staggered to his corner in a dazed and battered condition. His manager approached him and whispered in his ear: "Say, Slugger, I've got a swell idea! Next time he hits you, hit him back!"

Original Articles

SURGERY OF THE BILIARY TRACT

VIRGIL S. COUNSELLER, M. D.
Division of Surgery, Mayo Clinic,
ROCHESTER, MINNESOTA

The treatment of patients with disease of the biliary tract is one of the chief tasks of the surgeon. The frequency of acute cholecystitis with stones, stone in the common bile duct and stricture of the extrahepatic bile ducts make frequent discussions of their management desirable. The procedures employed for the correction of each condition have been fairly well standardized and are understood by the general surgeon; nevertheless, opinions differ as to what method or technic is best suited in a particular case. The decision must, therefore, rest upon the surgeon's own judgment and ability.

The recent improvements in preoperative and postoperative management, together with a better understanding of the physiology of the liver in some of the more complicated cases, have contributed enormously to a reduction in the hospital mortality and morbidity.

Acute cholecystitis. The question of immediate surgical treatment or conservative treatment in cases of acute cholecystitis has been debated at sectional meetings during recent years and the evidence seems to favor early surgical treatment but by no means is the opinion anywhere near unanimous. The experience of Heuer[3] in his report of 153 cases of acute cholecystitis is of considerable interest. He stated that the clinical manifestations fairly closely parallel the pathologic process in the gallbladder, but in other cases, even in the presence of subsiding or minimal symptoms, the pathologic process in the gallbladder may proceed to gangrene and perforation of the organ. He said that these complications occurred in approximately 20 per cent of all cases of acute cholecystitis. In this series of cases operation was performed deliberately during the acute stage in an attempt to lower the mortality from gangrene and perforation of the gallbladder. The total mortality was 3.2 per cent. However, in the 137 in which perforation and gangrene had not occurred the mortality dropped to 2.1 per cent. The mortality in the sixteen cases in which operation was performed after perforation had occurred was 12.5 per cent. These figures are comparable to those of most experienced surgeons and the point to be emphasized is that in approximately 20 per cent of these cases the pathologic condition progressed to gangrene and perforation. This is quite opposed to the generally accepted opinion in general practice. It is important, however, to stress that involvement of the general peritoneal cavity with bile peritonitis and a rapidly fatal course will occur in only about 2 per cent of such cases. When gangrene and perforation develop, the disease is usually confined to the gallbladder, hepatic region and the adjacent colon, duodenum, stomach and omentum. Early perforation of the gallbladder into the liver with abscess formation is not uncommon and is to be suspected by a continuation or exacerbation of the acute symptoms and tenderness over the edge of the liver.

Read before the meeting of the Illinois State Medical Society, Springfield, Illinois, May 19-21, 1942.
Joint Session of Sections on Medicine and Surgery.

It is important, it seems to me, to remember that acute cholecystitis with calculi is not quite analogous to acute appendicitis, primarily since the calculi unquestionably have been present for some time and have produced irritation and digestive manifestations; furthermore, it is not connected with a portion of the intestinal tract that harbors countless numbers of pathogenic bacteria. The appendix is part of the intestinal tract; therefore, it usually contains feces, and acute inflammation of such an appendage always is cause for urgent operation. The mechanism of infection in the gallbladder and biliary tract is quite different. Rarely is the infection due to Escherichia coli. Since the liver is a detoxicating organ and excretes organisms from the blood stream, it is reasonable to assume that the bacteria reach the gallbladder in this manner. Once single or multiple calculi appear within the gallbladder or common bile duct, the mechanism for the acute attack is completely prepared. The severity of the symptoms will depend for the most part upon the completeness and permanence of the obstruction of the cystic duct together with the degree of infection within the gallbladder. If the cystic duct becomes obstructed and contains a virulent organism, severe colic and fever will result. The usual clinical picture, however, of acute cholecystitis is pain, a temperature of 100° and 102° F., and moderate leukocytosis. The gallbladder is usually tender but may or may not be palpable. These symptoms in most cases subside within three or four days. It has always been a good rule that if the fever becomes greatly elevated at the onset and remains continuously high and is associated with exquisite tenderness there is serious danger of early perforation; and drainage is indicated without delay. I believe that this type of condition is different from those that progress more slowly and become gangrenous and perforate.

In most cases of acute cholecystitis the patients have experienced previous attacks, and when first seen in the acute attack twelve to twenty-four or thirty-six hours may have elapsed since the onset. Zollinger's[8] experience in this connection substantiates this view. An analysis was made of 121 consecutive cases of acute cholecystitis in which operation was performed in the Peter Bent Brigham Hospital[8] during a recent period of five years. In approximately a fourth of the cases the patients entered the hospital either after the acute attack had subsided or in the terminal stages of an acute attack; therefore, in a large percentage of the cases operation within the early phase of the attack would have been impossible no matter how desirable. Hydrops of the gallbladder associated with stone impacted in the cystic duct or a cholecystoduodenal or gastric fistula is an example of a fortunate condition during the acute attack. In the case of an impaction of the cystic duct, the inflammatory products in the gallbladder are absorbed, while in the case of the fistula the infected contents are discharged into a segment of the intestinal tract which is relatively free from infection.

The surgical judgment in such cases must be augmented by a fundamental knowledge of the changing pathologic picture, since it has a distinct bearing upon the surgical difficulties which may be necessary to deal with. Within a few hours following the acute attack, pericholecystitis and pericholedochitis develop, as manifested grossly by swelling and edema which distort the structures and cause them to be quite friable. It is in this situation that the cystic artery is often torn off, producing severe hemorrhage and technical difficulties which may result in injury to the common bile duct. The wall of the gallbladder becomes greatly thickened and difficult to handle. As the inflammation subsides, contraction and scarring ensue, which may be sufficiently extensive to obliterate the gallbladder completely. This process often distorts the common bile duct and the cystic duct upward, thus exposing the common bile duct to injury unless this altered relationship is immediately seen by the surgeon. Rarely is this condition complicated by intrahepatic lesions of serious nature, except in cases of obstruction of the common bile duct associated with jaundice and biliary cirrhosis of varying degree. The serious import of jaundice is well known and one may have to modify the technical procedure in dealing with the jaundice.

The technical procedures which may be instituted in the surgical management of acute cholecystitis with stones are cholecystostomy and cholecystectomy, with or without choledochostomy. Everyone is familiar with the frequency

of secondary operations on the gallbladder and bile ducts following cholecystostomy; therefore, it should be quite clear that cholecystostomy should only be done as a second choice and not as a preferable procedure. Patients with jaundice, those seriously ill and suffering from toxemia, those who have cardiac decompensation and myocardial damage, obese patients and those who have pancreatitis with regions of fat necrosis are most likely candidates for cholecystostomy. It should be looked upon as a life-saving measure and not as a curative procedure entirely, and when the patient's condition permits, further corrective measures may be undertaken if desirable. Foss and Lillie[2] recently studied 140 cases in which a secondary operation on the biliary system was required. They discovered previous cholecystostomy had been performed in 74.2 per cent of these cases. This is evidence that if patients live long enough 75 per cent of those who have had their gallbladder drained will require subsequent surgical treatment.

The operation of choice is cholecystectomy, with or without exploration and drainage of the common bile duct. The question whether the common bile duct should be opened in every instance is getting much attention just now. Frankly, I believe this decision must again rest with the individual surgeon. It is undoubtedly true that there is a greater incidence of stones in the common bile duct than was previously considered. It is rare to find stones in the common bile duct when there is a single cholesterol stone in the gallbladder, and stones are not likely to be present in the common bile duct if it is normal in size and if there is no gross abnormality of the wall of the duct, such as edema, lymphangitis, enlarged lymph nodes or fixation. However, if multiple small stones and stony sediment are present in the gallbladder, the chances are much greater that the common bile duct will contain similar material and it should be opened and drained, preferably with a T tube. On this basis, the pathologist should be quite accurate in estimating the possibility of stones in the common bile duct. Jaundice associated with acute cholecystitis requires that the common bile duct be explored although the disease may be due to inflammation rather than calculi.

Cholecystectomy in acute cholecystitis can be simplified and the dangers attending it can be minimized. An adequate incision should always be made. This must conform with the size and sex of the patient, because the gallbladder is situated differently in male and female, particularly when it is acutely diseased. Evacuation of a tense gallbladder so that it can be more easily grasped with forceps for traction is quite helpful. Years ago, W. J. Mayo[6] pointed out the ease with which an acutely inflamed gallbladder can be removed from above downward by incising its peritoneal attachment adjacent to the liver fossa. The edematous fluid can then be squeezed out of the cystic duct so that it is readily seen, separated and clamped. The cystic artery is ligated separately. By observing these maneuvers, the incidence of injuries to the common bile duct can be reduced. When infection and edema involve the gastrohepatic ligament, exposing and opening the common bile duct appears to be a more formidable task since the tissues tear and bleed easily. The common bile duct occasionally is covered with several small branching veins but the bleeding from these can be satisfactorily controlled if the gastrohepatic ligament is properly mobilized by the assistant. The common bile duct should always be identified by aspirating it with a long, small caliber needle. Making this a routine procedure will save one a very serious situation if the portal vein, which often appears similar to the common bile duct should accidentally be opened. I mention these incidents because by far the greatest number of accidents to the common bile duct are incidental to troublesome hemorrhage. Bleeding from the cystic artery cannot be safely controlled by sponging and blind clamping of tissues. Here again, if exposure has been adequate the structures can be easily grasped with the fingers, the blood sponged away and the severed artery identified and clamped.

It is obvious, therefore, that acute cholecystitis with stones presents many difficult and serious situations which may or may not require immediate surgical interference. But since it is of such a character, the condition most certainly should be treated as a surgical emergency in the hospital where the patient can be seen frequently to determine the progress of the infection and watched especially for the develop-

ment of pain and tenderness. Nausea and vomiting may greatly dehydrate the patient so that intravenous injection of solutions becomes imperative. My impression is that in the majority of cases it is preferable to operate when the temperature and pulse return to normal, usually in three to five days after the attack. The tissues are easier to manipulate at this time since the infection is subsiding; moreover, I believe the respiratory complications are less than they are in the more acute stage of the disease. Certainly it would be difficult to improve the convalescence. In those cases in which gangrene, perforation and localized abscesses may occur, the mortality will be greatly reduced by the direct application of 5 or 6 gm. of sulfathiazole. This is preferable to sulfanilamide because it is absorbed more slowly.

Stone in the common bile duct. The history of jaundice or its presence always makes examination of the common bile duct necessary. If the duct is dilated is should be opened and explored with suitable probes or scoops, but it must be noted that in the case of a functionless gallbladder the common bile duct will be enlarged but may not contain stones. It is, of course, possible to have stones in the common bile duct without jaundice or colic, which is the chief reason why many surgeons are now advocating routine exploration of the common duct when cholecystectomy is performed.

The greatest concern regarding stone in the common bile duct is when it occurs some months or years after cholecystectomy. The presence of a stone in the common bile duct is indicated if there is typical colic associated with chills, fever and jaundice. However, it must be kept in mind that typical attacks of colic, often accompanied by slight jaundice, may occur following cholecystectomy in the absence of a stone in the common bile duct, especially if there had been much cholangitis or pancreatitis.

Because of the discrepancies in diagnosis of stone in the common bile duct the patient should be studied in the hospital in order to determine any fluctuation in the concentration of the serum bilirubin and also to determine the hepatic function. Patients who have had repeated attacks of colic with chills and fever over an extended period are certain to have some degree of hepatic damage plus infection along the biliary tree in the portal spaces. I[1] demonstrated this a few years ago in my work on biliary cirrhosis. If a stone becomes impacted in the ampulla of Vater the concentration of serum bilirubin usually becomes fixed at 20 to 30 mg. per 100 c.c. However, if impaction is not constant, the jaundice fluctuates.

The technical difficulties in performing choledocholithotomy when the gallbladder has been removed should be stressed. It may be a comparatively easy procedure but it can be extremely difficult, especially if there had been much infection and drainage following the cholecystectomy. The method of approach to the duct is one of the secrets of success. Some surgeons advise that the approach be made mesial to the scar by first exposing the pylorus and duodenum. It is far safer and simpler to excise the scar completely through the peritoneum. This structure is then retracted laterally while separating the omentum and intestine, which are retracted mesially. This separation is continued upward to the liver by using the suspensory ligament as a guide. The gastrohepatic ligament can then be palpated by placing one finger through the foramen of Winslow. The duodenum can then be retracted with gauze, revealing the possible site of the common bile duct if present, which is further identified by aspiration. This type of approach is practically extraperitoneal and avoids any danger of hemorrhage or tedious dissection.

The drainage of the common bile duct following the removal of stones as a secondary operation is of considerable importance. Prolonged drainage is essential, particularly if there has been an associated cholangitis or pancreatitis. The period of drainage may vary from one to two months to a year depending upon the severity of the infection. The T tube is most suitable for prolonged drainage, since it will remain in the common bile duct without irritation and can be easily removed when desired by gentle traction without injury to the duct, and the opening in the duct will close promptly. Furthermore, the flow of bile can be controlled by clamping the tube; also, the bile ducts can be irrigated at any time.

Cholangiography has now become a routine procedure when using T tubes. The injection

of a radiopaque substance into the tube will reveal the patency of the duct and the ampulla. This is always advisable before the tube is removed, and the information gained as to the patency of the duct should be a permanent part of the patient's record.

Benign stricture. Strictures of the extrahepatic bile ducts present without question most serious and difficult surgical problems. Many papers have been presented giving the number of patients treated by individual surgeons and by groups. The end results as listed by competent surgeons reveal a mortality rate of 10 to 20 per cent. In a general discussion of surgery of the biliary tract, such as this, it must be emphasized that stricture of the common bile duct or hepatic duct is produced by trauma during a previous operation on the gallbladder or bile ducts and, therefore, should be preventable. By far the greatest number of such strictures are produced by clamping either the hepatic duct or common bile duct in an effort to control bleeding from the cystic artery which has become free during the course of cholecystectomy. Lack of sufficient exposure and excessive traction of tissue spell disaster in performing cholecystectomy, particularly in cases of acute or subacute cholecystitis. The dictum attributed to Lagenbock certainly is pertinent here, namely, "expose the dangerous areas first." When one learns that hemorrhage from a good sized artery is best controlled by the fingers or hand and not by sponges and blind clamping with a forceps, these surgical accidents to important structures will greatly diminish. The late W. J. Mayo told surgeons repeatedly that the tips of their fingers are their eyes within the abdomen so they should protect their fingers always; they are the most valuable instrument surgeons have.

The amount of infection in the bile passage at the time of injury is extremely important in regard to subsequent events. If the common bile duct or hepatic duct is clamped and ligated during the performance of cholecystectomy for chronic cholecystitis with stones, there will be immediate evidence of complete obstruction without much evidence of cholangitis. The usual symptoms of severe jaundice predominate. When infection is already present in the sacculi of the ducts at the time of injury, symptoms of cholangitis plus jaundice predominate. This is the usual clinical picture when the injury occurs following surgical procedures for acute or subacute cholecystitis. If the duct has been injured and unnoticed, immediate and prolonged drainage of bile is beneficial in relieving the residual infection and preventing fibrosis and parenchymal damage. Prolonged or intermittent drainage of bile is indicative of injury of a bile duct. When the drainage of bile ceases, jaundice occurs and is associated with colicky pain, chills and fever. When the discharge of bile recurs, other obstructive symptoms subside. These alternating symptoms usually persist weeks or months and are presumptive evidence of complete stricture. Whenever the stricture is partial or incomplete, sufficient bile may enter the duodenum to prevent much jaundice but the concentration of serum bilirubin will fluctuate and there the van den Bergh reaction will be direct. In evaluating the surgical risk and probabilities of repair, decision must be guarded by the general systemic effects of biliary obstruction, cholemia and intrahepatic infection. Judd and I[4] in 1927 pointed out that strictures of the common bile duct differ from those following aseptic ligation and that a general obliterative cholangitis may exist months before signs of stricture appear.

The surgical procedure for a benign stricture will depend upon the condition encountered at the time the gastrohepatic ligament is exposed; therefore, one will have to be prepared to apply that method which presents the least difficulty and will have the greatest chance for success. I think it is of particular interest that the operation of direct anastomosis of the duct to the duodenum, described by W. J. Mayo in 1905, which laid the foundation for future plastic operations upon the extrahepatic biliary ducts remains the most satisfactory operation today when it can be applied. Therefore, if sufficient normal duct remains above the stricture to permit accurate anastomosis of mucous membrane to mucous membrane to an opening in the duodenum without tension, good results will follow. The percentage of good and lasting results will decrease as the site of the stricture moves upward from the wall of the duodenum to the hilus of the liver. For example, in a consecutive series of ninety-eight cases of benign stricture, Walters

and Lewis[7] were able to perform choledochoduodenostomy in thirty-four, with good results in twenty-eight cases, while in the same series, hepaticoduodenostomy was performed thirty-one times and only thirteen patients were in good condition at the time of their report. Plastic operations of the Heineke-Mikulicz type are less favorable unless, as Lahey[5] pointed out, a T tube can be inserted through a separate incision in the duct above the stricture, the lower end of the tube passing beyond the incised stricture. Rubber tubes may be used to take the place of a destroyed duct, but the tube should not pass beyond the ampulla of Vater. The Mayo-Sullivan tube is of great value in performing right and left hepaticoduodenostomy or when a short stump of the common hepatic duct is to be joined to the duodenum. The production of an external biliary fistula and subsequent transplantation is an unsatisfactory procedure, to be used only when there is not any evidence of extrahepatic ducts. Fortunate is the patient whose gallbladder is still intact if he has a stricture of the common bile duct. In such a case the simple procedure of cholecystogastrostomy is sufficient.

Preoperative and postoperative treatment. All jaundiced patients should be observed in the hospital for several days before any surgical operation is done. It is vital to determine beforehand the prothrombin clotting time and the extent of hepatic damage.

Hemorrhage is now controlled quite satisfactorily by the administration of vitamin K. It can be given intramuscularly, intravenously, or by mouth, in the form of concentrates of the crude material or in the form of synthetic compounds exhibiting vitamin K activity (napthoquinones). Of the latter, 1 to 2 mg. daily for one to three or four days given by mouth, together with 10 to 15 grains (0.65 to 1 gm.) of animal bile salts, has proved to be adequate, or 1 to 2 mg. can be given intravenously or intramuscularly without the bile salts. Our method at the Mayo Clinic is to give vitamin K postoperatively for four or five days and observe the prothrombin clotting time for five days to a week and to administer vitamin K any time a rise in the prothrombin time is noted.

Extensive damage to hepatic function is often reflected in the failure of response to vitamin K therapy, the diminished excretion of hippuric acid below 1 gm. in four hours, delayed excretion of dye and reduction in the tolerance to glucose. Patients exhibiting hepatic damage of varying degrees will necessarily need prolonged preoperative preparation and, in addition, vitamin K, transfusion and administration of a 10 per cent solution of dextrose and a diet high in carbohydrates. These measures are continued postoperatively until such time as the liver demonstrates its recuperative power and an adequate drainage of bile is established, as revealed by daily reduction of the concentration of serum bilirubin and a general improvement in the patient's response.

SUMMARY

Acute cholecystitis with stones is a surgical emergency. Patients should be admitted to the hospital for observation and immediate surgical intervention should conditions justify it. Early intervention in acute cholecystitis is hardly analogous to early intervention in acute appendicitis. The operation of choice is cholecystectomy, while cholecystostomy should be done in case the risk is poor and as a palliative measure rather than a curative one.

Whether the common bile duct should be opened routinely is a debatable question. Certainly, if there is any degree of jaundice it should be opened. If multiple small stones and sandy material are present in the gallbladder, stones are likely to be present in the common bile duct. A typical biliary colic associated with chills, fever and jaundice occurring months or years after cholecystectomy is presumptive evidence that a stone exists in the common bile duct. It is advisable that patients exhibiting this syndrome should be studied in the hospital prior to surgical interference.

Benign strictures are practically all subsequent to cholecystectomy and therefore, should be preventable. The successful results decrease as the site of the stricture advances from the duodenal edge to the hilus of the liver; that is, a choledochoduodenostomy is more satisfactory than forming a biliary fistula from the liver substance to be transplanted later. The type of surgical repair will depend entirely upon the site of the fistula and the amount of scar tissue.

Preoperative and postoperative care of jaun-

diced patients is extremely vital to the successful conduct of surgical treatment of lesions of the biliary tract.

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IMPROVED METHODS IN THE DIAGNOSIS AND TREATMENT OF PROTOZOAN INFECTIONS OF THE INTESTINE

ALVA A. KNIGHT, M.D.
CHICAGO

The pathogenic intestinal protozoa include three primary groups:

a *Rhizopoda* or those which move by extensions of the ectoplasm or pseudopodia as entameba histolytica. The other members of this group, E. Gingivalis, E. Coli, Endolimax nana, Iodameba Butschlii, are non-pathogenic, while Dientameba Fragilis is of doubtful pathogenicity.

b *Mastigophora* or those which move by thread like or whip like filaments known as flagella, e.g., Giardia Lamblia and Trichomonae. Also the questionably pathogenic chilomastix mesnili.

c *Ciliophora* or Ciliata which move by means of cilia as Balantidium Coli.

There are others which are parasitic to man but not pathogenic. Necessarily my discussion will deal mainly with the most important: 1. Entameba Histolytica. 2. Balantidium Coli. 3. Giardia Lamblia.

1. *Entameba Histolytica.* In consideration of protozoan infections of the intestine were dealing with a group of diseases which have too often been overlooked. *First* — because of the mildness of the symptom picture. *Second* — by the fact these infections were thought to be prevalent in warm climates, but little present in our own climatic belt. *Third* — by the inaccessability of many physicians and patients to the services of well equipped laboratories manned by competent technicians specially trained in this field, and *Fourth* — by our failure to realize that 10% or less of all amebic infections fall into the dysenteric class and that in 90% the symptoms are not those of dysentery.

Competent diagnostic methods have shown us a higher incidence than we realized, and peculiarly enough a rather uniform distribution throughout all parts of the country studied. This has generally varied between 2% to 6% in the case of Entameba histolytica infection with some sections averaging much higher, and while adequate statistics on the other protozoan infections are not available, the infections are present to some extent in Illinois.

The studies of many workers and especially the recent work of Faust has shown that pathology, though at times minimal, is probably present in all histolytica infections. It is also conceded by workers in this field that symptoms, though mild, are probably present in all cases. Therefore, we as physicians should be constantly on the lookout when abnormalities in the function of the gastro-intestinal tract are present, likewise when malnutrition, fatigue, lack of drive, tired legs, aching legs and back, or even dull headache, palpitation, vasomotor irritability, and other symptoms are present. Any case of gastro-intestinal disturbance which is resistant to the usual means of treatment should be suspected. It is as frequently a cause of fullness after meals and belching as is chronic cholecystitis.

The tendency of the ameba to involve the cecum and appendix in 90% of cases and the sigmoid and rectum in 40% of cases should make tenderness of these areas of significance.

In the uncomplicated amebic lesions there is virtually no surrounding tissue reaction, no leucocytosis and no fever. Occult blood in the stools is not always present.

In examining daily stools of patients with entameba histolytica infection we may find numerous cysts in one stool, then have a series of several stools before another appears containing cysts. This makes it necessary never to depend

for diagnosis on the examination of a single specimen alone, but rather one should make repeated examinations at intervals until 3 to 5 stools have been studied. If they are still negative a brisk saline purging or several warm saline enemas given in succession may bring down mucus or other material from the ileocecal area containing the organisms, usually in the trophozoite stage.

The trophozoites, as we know, divide by direct division of the nucleus followed by division of the cytoplasm, and this multiplication takes place in the mucosa of the bowel; but when the trophozoites are extruded through the opening of the ulcers into the lumen of the bowel, if the stool is formed or if conditions are otherwise unfavorable for its continued existence in trophozoite form it rounds up, extrudes red blood cells and other foreign material, becomes smaller and immotile as a precyst, then secretes a cyst wall becoming a cyst, with a single nucleus with centrally placed karyosome and sometimes one or more chromatoidal bodies with rounded ends. It then slowly matures by nuclear division until at maturity it is a cyst of four nuclei and usually with no chromatoidal bodies. It is in this resistant form in which the infection is spread by food handlers, by legs or intestinal droppings from flies or roaches, by contamination of water supplies, or by fertilization of gardens with human excreta. When taken in with food or drink it excysts in the lower ileum where in the metacystic stage the four nucleated cysts have a further division of each nuclei giving rise to eight nuclei each of which take a small amount of cytoplasm as a small trophozoite again ready to invade the mucosa of the ileo-colic region.

METHODS

(1) The original method of demonstrating the motile trophozoite with clear pseudopodia and definitely directional movement is still an excellent one, but requires examination of the freshly passed liquid or semi-liquid stool or material obtained by catheter or proctoscope while it is still warm.

(2) The use of culture media enabled us to grow the trophozoites from cystic forms or from other trophozoites in the stool, therefore, the stool does not necessarily have to be strictly fresh, but should be kept in an incubator until examined. The procedure is adaptable only to trained workers in a properly equipped laboratory and in good hands it probably leads all other methods in accuracy. It requires 24 to 48 hours for final cultural results to be obtained.

(3) The demonstration through the proctoscope of minute reddened superficial erosions at the apex of tiny nodules, situated mainly on the summits of the mucosal folds (which when incised reveal flask like lesions opening into them) is the earliest macroscopic lesion. Later the lesions may be round or oval ulcers with congested thickened edges, but not undermined, or more often typical irregular ulcers with undermined edges and the intervening mucosa remaining normal.

(4) By complement fixation and,

(5) By skin sensitization tests. These two methods are unsatisfactory at present due to the difficulty in preparing a pure antigen. However, since Meleny has succeeded in causing excystation of entameba histolytica cysts in bacteriologically sterile media it appears these two methods may become valuable.

(6) By animal inoculation (Kittens, monkeys, dogs)

(7) The method we find most satisfactory for office use is the *Centrifugation Zinc Sulphate Flotation* technique worked out by Faust and his associates, but as yet not widely used in our own section. It has the advantage of concentrating the cysts so they can be found in numbers and more easily studied. At the same time the cysts of Giardia Lamblia, Chilomastix Mesnili, also the eggs of Ascaris, Trichocephalus Trichyuris, Enterobius Vermicularis, Tenia, and eggs of other helminths are floated to the surface and can be easily found. With this method the stools may be allowed to stand if kept cool, and we have even successfully examined stools shipped from states 2 or 3 days distance. It likewise is representative of the whole stool. It has the disadvantage of destroying the trophozoites and precystic stages and may even at times break up very young cysts.

The method is as follows: *First* — A direct smear in normal salt for trophozoites, also a direct iodine stained smear for early cysts. *Second* — The entire stool is then mixed with tap water enough to make an emulsion, then centrifuged for 60-70 seconds and the supernatent liquid poured off and water again added, shaken well and again centrifuged, this being

repeated several times until the supernatent fluid is reasonably clear. (The sediment containing the cysts if desired can then be stained and examined for cysts, and represents a concentration in number of 4 to 6 times the number present in unconcentrated stool). We then add to the sediment a zinc sulphate solution with a specific gravity of 1.180 (334 grams of Merck's ZnSo4 to a liter of distilled H20), shake thoroughly and again centrifuge for 60-70 seconds. The surface film is skimmed off with a wire loop and stained with D'Antoni's iodine stain (15 grams of powdered iodine in a liter of Sat. solution K.I.) and examined for cysts of ameba and other protozoa, and ova of helminths. We sometimes with this method see as many as 30 cysts per high power field. The entire procedure of preparing the specimen for examination requires but a few additional minutes.

The efficiency of this method has been shown to be:

85% in Trichocephalus Trichuris with centrifuge of 90 seconds
82% in Ascaris with centrifuge of 70 seconds
83% in E. Histolytica with centrifuge of 70 seconds
92% in E. Coli with centrifuge of 70 seconds
34% in Endolimax Nana with centrifuge of 80 seconds
20% in Chilomastix with centrifuge of 80 seconds
90% in Giardia Lamblia with centrifuge of 70 seconds
Balantidium Coli and Trichomonae unknown.
Tenia Group unknown.

In the *treatment* of amebic infection iodides, arsenicals and emetine have proven effective. The iodides are the least toxic and include three main preparations: Chiniofon (Winthrop), (Iodoxyquinoline Sulphonic Acid) also known as Anayodin or Yatren, Vioform (Ciba) (Iodochlorhydroxy Quinoline) and Diodoquin (Searle) (5-7 Di-iodo-8 hydroxy quinoline). Chiniofon is the drug of choice and should be given in doses of 3 to 4 tablets of 4 grains each three times daily for 8 to 10 days. It is not toxic, but often causes diarrhoea which may be controlled by other measures. A single course is often sufficient to clear the colon of ameba, but it may be repeated after two weeks if necessary. Vioform in doses of 4 grains three times daily for 10 days, or Diodoquin in doses of 2 to 3 tablets three times daily for 15 to 20 days give good results. Carbarsone has generally replaced the more toxic acetarsone and treparsol as the arsenical of choice. It is given in 4 grain tablets twice daily for 10 days. Its amebacidal value is high, while its toxicity is low. It is often given either preceding or following a course of one of the iodides. Emetine hydrochloride in doses of one grain daily for six days is of value in controlling the diarrhoeal symptoms of amebic dysentery. It is of most value in the treatment of amebic abscess of the liver or lung, and may be used in one grain doses for not more than 12 days. Aspiration of the abscess may be necessary, and is preferable to surgical drainage.

Emetine is a toxic drug causing muscular weakness, neuritis, myocardial degeneration and occasionally severe diarrhoea, therefore, should be used with caution, and certainly should not be repeated without a rest period of at least 14 days. It is likewise not a very effective amebaecide, Faust showing a recurrence of 81% within three months where emetine alone was used in the treatment of amebic infections.

2. *Balantidium Coli.* Malmsten in 1857 found balantidium coli in the stool of dysenteric patients and was the first to describe it. Since then it has been found in practically all parts of the world. It parasitizes both man and pig, and man's infection has come from swallowing minute portions of the excreta of pigs or of infected man.

It is the largest of the protozoan parasites occurring in man, the trophozoites in unstained specimens being 65 to 100 microns in length and 40 to 70 microns in width. They are oval, slightly greenish and actively motile, and covered with short delicate cilia which are in constant motion. Slightly to the side of the anterior pointed end is a peristome leading into a distinct cleft, the cytostome or mouth which in turn leads into the oesophagus. The endoplasm contains a large kidney-shaped macronucleus with a micronucleus usually lying in contact on its concave side, also one or more pulsating food vacuoles, the posterior one of which apparently empties into a small tube connecting with the surface through an anal opening or cytopyge.

The cysts are spherical or slightly oval in shape, measure 45 to 65 microns in length, are slightly greenish in color, have a doubly outlined cyst wall, and contain a single balantidium which may be observed slowly revolving within

the cyst wall. A macronucleus and a micronucleus may be observed in the granular cytoplasm.

The trophozoites live within and feed upon the tissues of the colon. The food vacuoles of this species have been observed to contain red blood cells, leucocytes, tissue cells, crystals and bacteria.

Reproduction occurs by binary transverse division, the micronucleus dividing first, then the macronucleus, followed by division of the body of the balantidium.

The infection of man is very infrequent and in some instances it apparently lives in the lumen without producing symptoms, and although Walker states the process of penetration of the tissues is not always accompanied by necrosis or ulceration, it usually penetrates the healthy epithelial layer of the intestine, there multiplies and produces ulceration or abscesses of the mucous and submucous coats at times reaching to the muscular layer. The ulcers are round, oval or irregular in shape, with undermined edges and floors covered with pus and necrotic material, and resemble very closely the ulcers produced in the intestine by entameba histolytica (Faust). The intervening mucosa may appear normal, or it may be swollen, and hemorrhagic areas may be present. The ulcers may communicate by passages beneath the mucous membrane. Sections of infected intestine show round cell infiltration, coagulation necrosis in the walls of the ulcers and abscesses, and nests of balantidia in the tissues, capillaries, lymph channels, and neighboring lymph glands.

Symptoms may be absent in some cases, but in the vast majority diarrhoea or dysentery, abdominal colic, tenesmus, nausea, and vomiting occur, while headache, muscular weakness and loss of appetite and weight have been observed. There is usually tenderness along the colon, also anaemia. The stools are usually those of a severe dysentery of the amebic type and contain blood and mucus although constipation may be present.

No specific treatment has been devised, but Acetarsone (Stovarsal) and Carbarsone administered as in amebiasis have given favorable results. Methylene blue enemata in 1 to 3000 strength has been successfully used also.

3. *Giardia Lamblia.* Giardia lamblia is a flagellate of world wide distribution, but increases in frequency as we proceed from the temperate to the warmer climates. It is the most common of the intestinal flagellates in man. The incidence in widely scattered areas varying from 6 to 22 per cent, being most prevalent in children under 10 years of age.

The trophozoites occur in the upper intestine, duodenum mainly, also at times in the gall bladder. It is a pear-shaped organism with a broad rounded anterior and tapering posterior end. Dorsally, the flagellate is convex but ventrally a large ovoid concavity or sucking disc occupies three quarters of the ventral surface. It averages about 14 by 7 microns in size and possesses 8 flagellae. It is seen in motile form in material aspirated from the duodenum but is rarely seen in the stools unless they are very liquid and still warm. Monkeys are apparently the only animal reservoir, but infections have been transmitted to mice, kittens, and dogs. The method of spread is the same as that of E. Histolytica.

Diagnosis is by finding the oval cysts which occur in the lower ileum, in the colon, and in formed stools. They average 7 by 10 microns in size, have 2 to 4 nuclei with well defined nuclear membrane and a small centrally or eccentrically placed karyosome. The cyst wall is unstained but the cytoplasm stains readily.

The pathogenicity of this flagellate in man has been questioned. Many clinicians regard it as the cause of a distinct form of dysentery, but other than superficial erosions secondary to the attachment of large numbers of giardia by the sucking disc to the mucosa of the upper bowel no pathology is known. The effect of gall bladder infestation beyond superficial erosion is not known.

Symptoms attributed to infection of the upper intestine in addition to diarrhoea consist of vague upper abdominal distress and perhaps at times a duodenitis.

Treatment of this parasitic infection has been primarily by the drugs used in the treatment of amebiasis, i.e., Carbarsone, Acetarsone, Treparsol and Chiniofon, and in the same dosage as used in amebiasis. However, these drugs have often failed to completely eradicate the infection. Atabrine in doses of 1½ grains t.i.d., for five days has proven a completely effective agent and

we have been unable to demonstrate cysts after a five day course of treatment. This drug as in malaria is not to be used again until a month has elapsed.

OBSERVATIONS ON THE PSYCHOSOMATIC TREATMENT OF PEPTIC ULCER IN WOMEN

DUANE W. PROPST, M. D.
Assistant Professor, University of Illinois College of Medicine
CHICAGO

This study was initiated through observing the frequency with which women, seeking relief from peptic ulcer symptoms, (1) protested against the failure of their men to assume their share of responsibility for the domestic economy; and (2) the promptness with which symptoms subsided when it was suggested to the patients that perhaps they rebelled, not against the need to work, but because their efforts to maintain the family were not appreciated.

A series of fifty private and dispensary patients were gathered on the basis of symptomatology alone. All were women. A diagnosis of peptic ulcer was made in thirty-eight instances by history, physical examination and x-rays of the gastro-intestinal tract. The remaining twelve cases had ulcer symptoms without demonstrable pathology and were therefore excluded from this study. Each of the thirty-eight patients was requestioned from time to time and the original history amplified when possible. An attempt was made (1) to differentiate between psychological and somatic onset and (2) to correlate therapy with the circumstances attending the appearance of symptoms.

The age incidence of the ulcer cases was twenty-four to sixty-four years with two-thirds of the number falling in the age group of thirty-four to forty-four years. All of these except five were or had been married. Four were widows, two were divorced and one was separated from her husband.

A tabulation of the associated pathology revealed dyshaemopoietic anemia in two instances, an elevated basal metabolic rate in three, a moderate arterial hypertension in two, a spastic colon in two, climacteric symptoms in two, tubercular laryngitis in one, infectious arthritis in one and cholecystitis in one.

Nineteen, or half of the women, were, constitutionally, ulcer types.

The Wasserman or Kahn test was negative in every case. As soon as the diagnosis was made each patient was placed on an ulcer diet and appropriate doses of amphojel or aklakine powders.

The following histories are typical of those obtained. They differ in form from the original only as they have been rewritten to present the facts in sequential order.

CASE 1.

Mrs. A. F. Age 40. The patient's earliest memory was of neglect. She was three years old when her father brought home his second wife and became thereafter too absorbed in this new interest to notice his daughter. Her step-mother mistreated her and, worst of all, kept her from her father. She ran away from home when she was nine years old. An Irish family let her stay with them in return for help with the house work and washing. After two years, her father found her and took her home.

Although her father was always good to her, he was seldom about. Her step-mother was consistently abusive; her father blind to her need of affection. It was during this period of her life that her stomach trouble began. When she was thirteen years old she obtained work in a laundry by giving her age as sixteen. She worked there until she was married five years later. Throughout these years she had recurring attacks of ulcer symptoms. No physician was consulted. She obtained relief by taking soda.

One day a gracious youth found her and, like her father or perhaps the prince in the fairy story, carried her away as his bride to the first happiness she had known since the age of three. At last her craving for affection was satisfied. Her ulcer symptoms disappeared and were forgotten.

The current history began when the patient was thirty-two. An attack of acute abdominal pain accompanied by vomiting of blood followed a quarrel with her husband. He had always used alcohol freely but of late had fallen into the habit of absenting himself from home for a week or two at a time while he indulged his appetite for gin. During these periods of neglect, the patient experienced epigastric distress and heart burn. Finally, her husband lost his job; the patient went to work to support the family; the husband became indifferent; they quarreled and the patient vomited blood. Episodes similar to this one recurred at intervals during the succeeding eight years. The patient's need for affection was never more than partly satisfied by the love her children bestowed upon her.

The attack that brought her to the dispensary occurred on her daughter's wedding day. An announcement of the proposed marriage was the occasion of a demand for a church wedding. The patient asked that the wedding date be postponed until the family

finances were less precarious. The daughter rejected the suggestion. The patient thereupon borrowed to pay for the wedding. She was afraid that if she did not do so, her daughter would turn against her. She could not tolerate the thought of losing her child's affection. The patient suffered an attack of acute abdominal pain the morning of the wedding. After the ceremony, and the daughter had left on her honeymoon, she vomited blood.

At the present time, Mrs. F. is free from ulcer symptoms and on a general diet. Her daughter and son-in-law are living with her and sharing the work and expense of the household. They are all happy together. She is no longer required to work beyond physical endurance nor suffer loneliness and neglect. But she still dreams that the man who once brought her happiness will behave again as he did that day.

CASE 2.

Mrs. M. D. Age 56. The patient has had indigestion since girlhood. She was an unwanted child — the last of a large family — and a burden to her parents. She was not allowed to forget that. She married an only son when she was twenty-six years old and became an unwanted daughter-in-law. She did not get along with her husband because he thought more of his mother than he did of her. At no time did he take an adult attitude towards his responsibility as head of the family. Even though the patient worked, their economic status was always desperate. They quarreled constantly. Each quarrel was followed by an attack of epigastric pain. They were divorced after ten unhappy years. Although she loved her husband she could not forget that he denied her the affection she expectd from her married life.

The patient married a second time when she was forty-five years old because she wanted some one to take care of her. This husband is a steady worker. She is as happy with him "as she could be with any man" and was free from ulcer symptoms until, because of age, he lost his job six years ago. She was forced to go to work. This "broke her health." The need to work was reminiscent of her earlier failure to be the center of interest of her family group. The extent to which a husband supported her symbolized the intensity of his interest in her. If he did not work, it was as though he no longer wanted her about.

The patient's symptoms subsided without medication when she was shown that her point of view was one she supposed the outside world took of a working woman. She was led gradually to perceive the substantial compensations of her present martial situation; namely her position as the all-important member of the family. Finally, her nostalgia for that lost moment of her first marriage when she had believed she was no longer the unwanted, ugly duckling of her childhood, was largely overcome.

CASE 3, 4, 5, 6.

There were four additional cases in which the husband of the patient was an only son. In each instance the man demanded lavish attention but gave little in return. He was hypercritical of his wife, chary with compliments. Each husband consulted his mother about the management of his finances and household and ignored the opinions of his wife. In one instance the mother-in-law planned the family vacations. This state of affairs led to frequent quarrels following which the patient would suffer an exacerbation of ulcer symptoms and the husband would go off on an alcoholic debauch or a visit to his mother. In each of these cases the husband was shiftless and the patient worked to help support the family. Each patient was fatigued to exhaustion by holding down a job, doing housework and pampering her husband without winning the compensation of appreciation. Oddly enough the need to work evoked no protest. After all, said the patients, work was simply a means of self preservation. It was not, however, a reason for living. The fundamental difficulty was a conflict between two personalities, both of which expected a monopoly of the other's attention, interest and affection. An explanation of the various factors involved enabled medication to be withdrawn.

CASE 7.

Mrs. A. B. Age 27. This patient had had an unhappy childhood and had always suffered from a "weak stomach." She was a factory worker at the time of her marriage. She married to have a home of her own, children and some one to love her. She began her married life in a furnished room and still lives in one. She is unhappy because she has no possessions, no children and no one attentive to her.

Her ulcer symptoms appeared shortly after her husband lost his position a few months following their marriage. She rather enjoyed returning to work but when she discovered that her husband was spending the money she made on liquor and other women she had a severe attack of epigastric pain. As she was considering a divorce, he obtained a W. P. A. job. For a time he worked steadily and devoted himself to her. Her indigestion disappeared. He was, however, unambitious and irresponsible. He became a drifter. Odd jobs held his interest for short periods. He reverted to his promiscuous habits and her ulcer symptoms recurred.

During the past year the man has made little effort to obtain employment. If he works for a few days, he spends his earnings on questionable friends. As a means of obtaining the affection she craves, the patient now occasionally goes out with other men. A passionate episode may bring temporary surcease from pain but it is too ephemeral, too insincere to be of lasting value. Nor is it successful as a sadistic attack upon her husband. He does not care. Her original need for affection remains unsatisfied. Nevertheless, it was possible in this case to control all symptoms by conversation and sedation alone.

The thirty-eight women in this series were unanimous in associating worry and nervousness with exacerbations of their ulcer symptoms.

They worried over stringent finances and masculine irresponsibility. They quarreled with their husbands and then paid for the quarrel with an attack of epigastric pain. They invariably reacted realistically to financial insecurity. While their men waited for something to turn up, they found work. They paid the bills and then grew nervous and irritable because their husbands did not assume the responsibility they thought they should. In no case, however, did they rebel against poverty *per se*.

In each case studied the date of onset was found to precede the time given in the original history; that is, the patient had suffered for many years, before consulting a physician, from mild epigastric pain or mid-afternoon distress or local tenderness, relieved by taking food or sodium bicarbonate. The significant psychological factor was found in the anamnesis of these early years. It appeared at a time of dramatic change in the emotional relations between the individual and the one most dear to her and recurred whenever a similar crisis arose. Thus in the first history quoted the significant event was the incorporation into the family group of a step-mother who diverted the affection of the father from the patient. It was repeated when the patient's husband, upon whose love she was then dependent, grew indifferent to her.

The psychological factor is a *problem* that can neither be laid aside nor solved. The patient thinks the trouble is a matter of worry and nervousness. As the history develops, she ascribes the worry to financial and domestic difficulties. Only after it has been pointed out to her does she perceive that the problem she has defined is an imperative need to be understood and appreciated. During the moments of her life when her goal has been achieved her symptoms have disappeared even though adverse domestic conditions and economic distress have been as acute as before.

The somatic onset was marked in each instance by a period of fatigue. The patient looked after the children, cooked the meals, did the housework and earned the living for the family as long as she was physically able to do so. And then she angrily rebelled at the injustice of masculine irresponsibility that permitted such a situation to develop.

In none of these cases was it possible to do anything about the financial or domestic problems that had not been done by the patient except to insist that she get more rest. But each patient improved as soon as she discovered that a personal interest was taken in her difficulties and the nature of her problem was appreciated. Her visits to the dispensary or office assumed the character of an outing. She talked freely of herself to an understanding auditor. Very quickly her symptoms subsided. It was possible to liberalize the diet and discontinue medication.

The patients in this series were under observation for from one to two years. During that time, with one exception, they were returned to a general diet. Thereafter their symptoms were controlled by conversation and sedation alone.

HEALTH PLANNING

J. Howard Beard, M. D.
URBANA

The achievements of Gorgas at Panama, the success of the Framingham experiment, the records of Syracuse, New Haven, Chicago, and Evanston, the results in Rutherford County, Tennessee, and the extensive demonstrations of foundations, alone or in cooperation with states, counties, and municipalities, make discussion of health planning seem late and superfluous. Yet in many localities, health projects are conspicuous by their absence or are only in their inception. Planning is, therefore, necessary, and overdue.

As the procedures for community surveys, the organization of health units, the qualification of personnel, budget making, and methods of appraisal have been standardized by authoritative bodies—state, national, and international—and their transactions are widely known, these essential phases of health planning require only incidental consideration. Concern shall be primarily with the need, the object, and the importance of health planning and the factors which make for its success or failure.

With a gap of at least three generations between what can be done and what is being done to improve health, only intense planning can make practice equal knowledge in an ordinary

lifetime. The extraordinary rapidity of epochal discoveries in medicine in the last three-quarters of a century and the comparative slowness of their application are similar to pacing a high-powered car of today with a fliver of the "Gay Nineties."

The difference between *knowledge* on the one hand and *practice* on the other has been further increased by the fact that science has created other problems for each one it has solved for the sanitarian and physician. Every new chemical process potentially writes a new chapter in industrial hygiene. Every development in physics and engineering which modifies environment has health aspects. Every advance in biology is almost certain to have eugenic, nutritional, pathological, or immunologic implications. Progress in these sciences also produces social and economic trends which contribute to greater vigor and better adjustment, or to disease and mass insanity.

The use of steam power, the development of the gas engine, and the employment of electric energy in the mechanical arts have produced an industrial era and have changed a population mainly rural into one largely urban. This change has given rise to slums, overcrowding, smoke, dust, diminished sunlight, fumes, noise, accidents, vocational disease, malnutrition, and a better chance for he spread of infection. Marriages have decreased, divorces become more frequent, delinquency has reached endemic proportions, and birth rates have fallen until certain philosophers of doom vie with each other in predicting the beginning of the end.

The coming of the airplane, the development of submarine navigation, and the continual establishment of new speed records in the air and on land and sea have created health problems by bringing distant disease centers nearer and nearer to every home. The plague of India, the yellow fever of South America, and the spotted fever of Montana are now but a few hours removed from every fireside.

Old diseases are taking a new lease on life by adapting themselves to modern conditions. Spirochetes, pneumococci, streptococci, and gonococci are developing resistant strains which are able to withstand the attacks of the chemotherapist, the serologist, and heat treatment. Although tuberculosis has fallen from first to seventh place as a cause of death, about one draftee in every hundred in certain localities is reported to have it in an active form. Of those entering sanatoria more are in the advanced than in the minimal stage of the disease. Spotted fever is no longer confined to the Rocky Mountions, but has appeared in many states. Tularemia is common in hunters and housewives. Undulant fever, the first case of which was reported in this country in 1924, is distributed throughout the nation. Increasing deaths from heart disease, cancer, diabetes, and nephritis earlier in life are a challenge to public health administrators.

Provision of prompt care to restore those suffering from industrial accidents and disease to health and to earning capacity is far from adequate. Scientific control of the surroundings of workers is yet to be widely established. Employees are not receiving the education essential for healthful living in the community and for the maintenance of efficiency in their occupation.

Lives and health being saved by sanitation and immunization are being lost through accidents. Epidemics of injury rival those of disease. The situation is not a cause for dismay but one for intelligent planning to attain health standards equal to present knowledge.

The ultimate objective of health planning is the production of physically fit, mentally alert, socially wholesome individuals to live most in the best environment science can provide. It includes the complete eradication of preventable disease and the modification of economics, customs and culture wherever they interfere with men in the attainment of their best. The concerted action of public services to use science, natural resources and the aptitudes of the people for the common good is likewise an essential aim of health planning.

Prevention is Essential—If the value of health planning is to be measured directly as the effectiveness of the individuals of a community and inversely as its morbidity rate, optimum nutrition is paramount in the promotion of public health. The wide prevalence of dietary deficiencies, incipient, latent, and obvious, are probably the greatest cause of subnormality, defectiveness and ill health. Optimum nutrition is not only adequate water, roughage and sufficient calories, but the best amounts of amino

acids, the right carbohydrates, the correct lipoids, the proper vitamins and the inorganic salts. All these constituents are necessary to insure the highest quality of tissue, the most effective function and the greatest resistance to disease.

The insurance of the best diet is the greatest contribution planning can make to health. Such a task is as difficult as it seems simple. Customs will have to be modified, prejudices overcome, ignorance combated, fads eliminated, economic conditions improved, and education motivated as never before.

Planning also includes the widest use of well established methods of immunization. Laymen must be persuaded to support actively the program necessary to stop the occurrence of thousands of cases of illness whose means of prevention are known. Social agencies must do their part by the provision of wholesome recreation and facilities for the wise use of leisure. Economists, industrialists, employers and workers must make their contributions. Physicians, nurses, and health officials, however efficient, are not enough. The police must combat venereal disease by law enforcement. Only the combined efforts of the entire community can eradicate syphilis and gonorrhea, repress prostitution, and rehabilitate its victims.

Maternal care and the promotion of infant and child welfare are immediate objectives of health planning. Good conditions of employment are necessary in the prevention of disease, maladjustment, delinquency and unrest. The control of habit-forming drugs to reduce accidents, decrease crime, and prevent ill health is a part of a well organized health program.

Sanitation Paramount—Environmental sanitation is highly important in health planning. Safe, plentiful, supplies of good water for drinking and industrial use must be provided. Sanitary privies and septic tanks for rural areas, and sewage treatment works for municipalities are necessary to prevent nuisances and epidemics. Raw garbage must be so handled that trichinosis will not be increased, nuisances created, or valuable by-products lost. The community must not be advertised by heaps of refuse and the old tin cans it has discarded.

Community health planning is in the primitive stage until an abundant milk supply of the highest quality and maximum safety has been provided. As milk is being transported from increased distances to meet the demands of metropolitan districts, it must be supervised from cows to consumers. Food supplies are becoming more and more dependent upon long hauls for their abundance and variety. Greater precautions are, therefore, necessary to insure their quality and freshness. Refrigeration, careful handling, and rigid inspection are essental. High sanitary standards for eating and drinking establishments and good health of those engaged in the preparation and serving of food are essential in any program for community betterment.

Planning Protects—The prevalence of malaria in certain localities, the risk of the introduction of yellow fever into regions where conditions are favorable for its extension, the danger of rats becoming sources of typhus fever, Plague, or leptospirosis, and the widening of the areas in which spotted fever is endemic, make adoption of methods for the eradication and control of vermin necessary in housing, food storage, and transportation.

Planning should include ample safeguards against accidents in the home, in schools, in the factory, on the streets, and on the highways. Smoke, dust, and noise must be reduced to a minimum. In air conditioning, due regard should be given to radiation, convection, vaporization, humidity, and air movement. Heat production and loss, and zones of physiologic response ought to receive attention to prevent discomfort and extremes which may be injurious to health, or cause too great contrast between interior and exterior temperatures.

In industry, planning must make provision for periodical inspection and regular appraisal of plant sanitation to insure adequate protection and prevent the occurrence of occupational disease. First Aid should be provided and vocational illnesses diagnosed early and promptly treated. Means should be developed for the rehabilitation of workers within each organization or by co-operation between plants. An intensive program of health education should be conducted to promote health and maintain efficiency.

Social Lags Require Attention—The American way of life pre-supposes the obtainment of a well-balanced diet, suitable clothing, healthful housing, education, and moral and religious

instruction. Planning for health includes minimum standards of housing to insure the physical, mental, and social well-being of those in low-rent, as well as high cost dwellings, on both the farm and in the city.

In housing, health is inseparably associated with economics and the education of the masses. Unless these two factors are advanced concurrently with better housing, people will merely be transferred from undesirable to more attractive dwellings only to find themselves sooner or later in their previous condition. An economic, social, or cultural lag in any part of a community is a liability to all sections of it and action to prevent or eliminate it, promotes health.

Education Necessary—Health education is as essential to health planning as oil to machinery. It reduces resistance, eliminates friction, and accelerates action. By health education is meant training which modifies conduct, promotes proper attitudes, and stimulates a demand for the application of science to the improvement of the individual, the community, and the race. Health education is not merely the transference of information from one person to another, but it is *knowing* and then *doing* what is in the best interests of self and society.

Health education requires the cooperation of the public schools, departments of health, and state and federal agencies. The members of these groups have mutual obligations, interdependence, and common objectives. Their teamwork is imperative. Health education should take four directions: systematic teaching in the public schools and colleges by instructors with adequate scientific background, pedagogic training, and experience; reaching the public by lectures, exhibits, demonstrations, newspaper articles, pamphlets, the cinemas, etc.; providing "refresher" courses for physicians, nurses and other health workers; and strengthening courses in preventive medicine for future doctors.

Organization of a community for health education is in itself practical instruction in both preventive medicine and democracy. It provides a study of, and an approach to, local needs and is preferable to programs motivated by personal or special interests. The best plan for teaching health is yet to be conceived and blueprinted. Local conditions and personnel available, usually are decisive factors in determining what is accomplished. The kind of people working together rather than the means of cooperation adopted, insure failure or success. The magic words in health education are patience, persistence, and a sense of humor.

Recreation Promotes Health—Health planning should provide for recreation. The multiplication of machines, rapid transportation, and shortening of hours of work have produced leisure faster than it is being wisely used. Thousands of boys have few or no regular tasks. In many instances, they are the tragic victims of leisure before their community has a program to help them. The situation is hardly more favorable for girls. Labor-saving devices for the home, the canned goods industry, the corner delicatessen and shop made clothes leave them very little to do. They, like their brothers, have time on their hands but few plans to make the most of it. Even many parents need help to make the most of the leisure modern science has provided them.

Passive activities like listening to the radio, attending movies, riding in automobiles, or reading the funny paper, do not make leisure a means to increase vigor, promote mental alertness or produce creative thought. Recreation to improve health lies in the direction of out-of-door life, outings, sports, and games, rather than in mere relaxation which neither exhilarates nor inspires.

A simple life in the woods, nature study, and out-door exercise dissipate worries and vanish cares. The "shut-in" who participates in games and sports, develops interests outside of himself; the diffident discovers aptitudes which give him confidence; the timid finds courage and comfort in association and competition with others; the team-work essential on the trail and in the contest, develops self-discipline, self-sacrifice and the cooperation so necessary in successful living and happiness.

In planning for health, the close relation between health and recreation, the general welfare and the wise use of leisure should be recognized. Better physiques, greater agility, finer poise, and contentment,—the essence of good mental hygiene—are the results of wholesome diversion. The community should make their cultivation possible.

Environmental—Although sanitary policing has largely been assumed by other divisions of local government, health planning is still concerned with the maintenance of attractive environment. Clean streets and alleys are not only esthetic and good advertising, but a contribution to public health as a means for the control of vermin and insect-borne disease. The improvement of yards has a similar effect and sets a higher standard of living which tends to reduce sick and death rates.

Improvement of drainage removes nuisances and breeding places for malarial mosquitoes, and often provides for gardens and sports. Thus the nutrition, vigor, and health of those in the vicinity are improved. The prevention of stream pollution implies more than the sanitary disposal of sewage and industrial wastes. It increases real-estate values, adds to the food supply and provides fishing, bathing facilities, and boating for those who might otherwise not be able to enjoy them.

The creation of excellent parks is an important feature of health planning. They bring the great "out-of-doors" to city dwellers, promote happier family life and put people at ease in a world of tension and cynicism. Even landscaping, natural or artificial, may contribute to health through mental hygiene. Man still needs inspiring places where he may reflect and take courage.

Important Considerations—Before health planning can take definite shape, a group representing all the major interests of the community should be formed, a chairman selected, an advisory council chosen, and special committees appointed to study the various problems which are certain to arise. Thorough consideration must be given to the enabling acts under which the health organization may be set up, the area to be included, its population, taxable wealth and the objectives to be attained. Legally, the area must be a political unit. In some states it may be a district, a municipality, a county, a township, a road district or a combination of two or more of these. There must be adequate authority to levy taxes for full-time health work and to give the appointed personnel the legal status essential for the proper performance of their duties.

The taxable wealth of the unit should be sufficient to provide adequate funds without an excessive rate of taxation. The amount of public debt per person and the spendable money income per individual are probably the best indices for the determination of the ability of a region to support a health department. In the absence of a subsidy from an outside source, it is usually unwise to create an independent health unit unless its tax basis will yield $10,000 without exceeding an annual cost of $1.00 per capita or $4.00 per average family.

While there are special situations where it may be best to disregard this general rule, it should always be remembered that an effective program and continuous improvement in public health rarely come from an under-manned organization with under-paid personnel and inadequate funds for operation and transportation.

It is better not to begin than to start in the wrong way. The success and permanence of health organizations depend upon an adequate staff. Make-shift "set-ups" and so-called "modest beginnings" with the appointment of an individual without proper training and experience are rarely worth their cost. Very often such attempts so discredit public health work that influential citizens later refuse to give their moral and financial support to the development of a better health organization.

Disease reduction is dependent upon the use of technical knowledge. Its application in a democracy can only be most highly effective where popular understanding insures thorough cooperation, sufficient funds, and properly trained personnel. The public should not be led to think otherwise.

Factors Assuring Success—Public health work should be efficient from its beginning. Although everything cannot be done at once, each step should be in the direction of an adequate program. It should be such as to win support by showing its usefulness and the advantage of its further development.

The organization of health units is no longer an experiment, but a standard procedure. Needless expense and confusion occur only where personnel are poorly trained and inexperienced. With well-defined objectives, a complete preliminary survey and careful planning, the creation of a health unit presents few difficulties.

Soundness, not haste, is the way to rapid progress in health work. Indecision and activity without advancement towards definite goals, are failure not success. Money should be spent no faster than it can be used wisely. A well presented budget is often a means of winning enthusiastic supporters. Ill-advised and unnecessary health measures are liabilities and not assets.

A health department should be organized to do both the basic work of such an agency and to meet the special health problems of the community. Its policy should permit the use of the aptitudes of its staff. A proper relationship should be maintained with other local governmental departments and it should assist in the promotion of the health programs of the state and federal governments.

A health organization is not merely a piece of administrative machinery whose perfection insures success; it is a group of people whose training, experience and character determine its value, warrant its support by taxation, and justify its existence. Even a poor set-up with excellent personnel will prove its value, while a good organization with a mediocre staff will not be worth what it costs.

The rest of our lives will be spent in a world where thousands of men and women will be physically and mentally crippled by man's inhumanity to man. There will be many victims of disillusionment, disappointment, cynicism, and bitterness. They will be a fertile soil for organic disease, neurosis, psychosis, and social inadequacy.

In the decades which lie immediately ahead, the health planner and the health worker will be able to do much to prevent disease and alleviate suffering. They will have an enviable opportunity to promote the vigor, the faith, the hope, and the charity which are necessary for mental health and social effectiveness.

A battalion on recent maneuvers in Louisiana had been ordered to end action. It was pouring rain and the boys were standing knee deep in mud. As the order was given, one rookie piped up:

"Swell! Now let's all sing 'God Bless America' — and leave out Louisiana."

ENGINES OF THE BODY

Frank Garm Norbury, M. D.
JACKSONVILLE

Chairman's Address, Section on Medicine,
102nd Annual Meeting
Illinois State Medical Society, Springfield, Illinois,
May 20, 1942

Members of the Section on Medicine: You have already had a full dosage of two subjects that ordinarily I might have chosen for a talk such as this. Topics in my special field of interest, neuropsychiatry as a part of general medicine, have been discussed by experts. This morning's program on Medicine and the War appealed especially to me as an officer in the Medical Reserve Corps and as a physician.

Since we think, talk and in many ways live by mechanization at present, both in civil and military life, I decided to take up with you this afternoon some phases of the machinery of the human body. Normal and pathological physiology have interested me ever since I began the study of medicine. The response of the body as a machine, as an engine producing work, has a fascination all its own. When some disturbance arises in structure or function so that impairment of work production occurs, the "trouble shooter" i. e. the physician, is called in for diagnosis and treatment. I would not want to convey the impression that my approach to this subject is entirely mechanistic. My real opinion is quite contrary to the mechanistic idea, as I shall point out later on. The trouble is as often with the driver as it is with the machine but the driver himself or herself should know something about the mechanical principles and most certainly the repairman should and does have this knowledge.

Sir Arthur Keith, the great English physiologist, wrote a book *Engines of the Human Body*. I had found it extremely interesting at the original reading and at later reference use so naturally turned to it upon deciding to discuss this subject. Therefore, what I have to say is perhaps a review of this book rather than any original composition. When I re-read it recently part of the foreword appealed to me as being applicable to our situation now as it was to the English situation at the time the lectures, on which the book is based, were given. These were delivered during World War I, hence the

applicability of the following quotation "Just at that time more than a million human machines were fighting grimly and freely giving their lives in foreign lands that we and our children might have homes and freedom. It was a serious time then; men and women were hungry for real knowledge, not fairy stories." We feel the same way today.

One may find in the human body the whole group of expressions of expenditure of energy that are reminiscent of chapters of college physics. Mechanical, thermal, hydraulic, sound, light, electrical systems are all present.

In the mechanical group the lever, the balance, the pulley, the wheel, the inclined plane all find their counterparts in various types of skeletal structure and function. Simple levers of the first order with the weight between fulcrum and power are seen in the attachments of the skull to the trunk. The principle of the balance comes into play here too for the balance is a first order lever. Second order levers with fulcrum beyond weight are exemplified in the movements of walking where the fulcrum is the ball of the foot, the weight is transmitted through the ankle joint and the power is in the leg muscles. A more complex lever system of the third order is seen in the hand and forearm with the fulcrum between weight (the hand) and power (biceps and brachialis anticus muscles). Pulley systems are numerous in the human machine, from the small superior oblique muscle of the eyeball to the tendons of the large hamstring muscles working through the fascial layers behind the knee joint. The principle of the inclined plane is seen in front of this same joint during contraction of the quadriceps muscles, when the patella moves across this region. As for the wheel, with the invention of which transportation began, Sir Arthur Keith brings out a point I had never before realized. He states that the successive steps of man in walking or running are the equivalent of the downward and backward movement of spokes centering on a hub at the hip joint. Man has the advantage, however, over the inert wheel in that he can move his two spokes alternately, can adapt their length and angle of contact to the contour of the ground thereby being able to transport himself over terrain that not even the most ambitious jeep or tank can cover.

Heat production is an accompaniment of all forms of energy release or work. Lubricating systems, cooling systems, air conditioning apparatus are nothing more than devices to lessen excess heat production and transmute more of the accompaniment into work. Each machine has its optimum temperature of operation for maximum efficiency. The airplane motor may fail when taking off and overcoming gravity if it has not been properly warmed up. Some of us can't get going until after we've been warmed up and had the vasodilating effect of the caffeine in our morning cup of coffee as well as the warming sensation of the coffee itself. The optimum temperature of the human machine is set at 98.6 degrees Fahrenheit. How is this heat maintained, how is it regulated? These are interesting questions in thermodynamics which I am not attempting to answer for in the first place I do not know the answers and in the second they entail many other problems, one of which, climate and weather, I almost inflicted on you this afternoon in view of our having a weather station at the Sanatorium. Heat production in the body is carried out in the same manner as outside it by the combustion of carbon and hydrogen in the presence of oxygen to produce carbon dioxide and water. It is not as simple as this may sound for many intermediate processes and products arise. Oxidases and vitamins of the B group are essential for combustion. Breakdown products of carbohydrate and fat are intermediary products. "Fat burns in the flame of carbohydrate" is an old maxim of nutrition. While the flame as such is not visible the chemical reaction involved in the utilization of glucose in tissues produces heat. Protein too does its part. Chemical changes of an associated nature also produce certain molecular rearrangements in cellular structure which have to do with the function of different cell types. How the energy is set free is another question to which we do not know the answer. We do know, however, that there is sufficient heat set free in the various chemical reactions going on in our bodies to do a lot of work. In fact if it were not for the heat regulating mechanisms of the body the temperature developed in these reactions would be dangerous. One often thinks of infections for high fever, yet the extremely rapid oxidation produced in a thyroid crisis or

the change in the heat production-heat loss ratio occurring with lesions in the regulatory center in the brain can produce temperature elevations that make those associated with most infections seem mild.

Physicians and laymen lay much stress upon the heart and its diseases. They do so rightly when one considers their importance as a cause of death and disability. I would not minimize this importance. Yet I do want to remind you that on the proposition in general and on the point of view of this paper in particular the cardiovascular system, and the blood as well, are but the servants of the millions of tissue cells of the body. First we should follow up the problem of heat production and heat loss then take up the pumping station and distribution system relationships. It may be elemental, yet I think it worth while to remind you that the primitive function of the heart to pump and of the circulating system to carry the blood are more important than anything else. All our knowledge of plasma proteins, acid-base equilibrium, humoral antibodies, etc., is accessory to heat or work production and heat distribution. We speak of the need of oxygen, we use it therapeutically for anoxia of various causes. What is oxygen for except to maintain energy in the way of heat production and work on the part of the cells? We get hungry. Leaving aside the pleasurable sensations of a good meal in good company what is food for except to be digested, assimilated and carried to the cells to be stored or to be utilized in energy production? The same medium that carries these substances to the cells carries away the products of combustion and tissue breakdown. Also for our immediate subject of discussion it carries away excess heat to be used in less active heat producing areas or to be disseminated through radiation or convection. By utilization of physical principles the body as an engine develops more energy per unit of fuel than any machine devised by man.

Wiggers in the monograph "The Circulation in Health and Disease" and Sainsbury in the publication "The Heart as a Power Chamber" illustrate beautifully the application of the physical principles of hydraulics and hydrodynamics in this engine of the human body. Clinical tests of circulatory function such as the minute volume of heart output, the Schneider index, the simple exercise test are, when one analyzes them, nothing more than applied hydraulics. When I say nothing more than applied hydraulics I most certainly do not mean to minimize that important branch of physics. One of my very good friends is professor of theoretical and applied mechanics at one of our important universities. Students of his have told me that if they ever got the "hang" of his courses they knew they would never have any trouble in any other courses in engineering. I know that conversations with him have been of immense value to me in trying to learn something about the human machine. Particularly has this been true as regards the circulation. It was a natural corollary to connect Fulton's monograph on Harvey's work on the circulation with his later publication "The Physiology of the Nervous System" after such conversations and for these to serve as the stimulus for the paper I had the privilege of reading before this section two years ago on "Applications of Vitamin B_1 to Neuropsychiatry." The arrangements of the heart as a double pump together with the stream flow of the freshly oxygenated blood through the carotids to the brain constitute of themselves a wonderful example of anatomic structure meeting physiologic demand. Even if one were inclined to be mechanistic in viewpoint about certain isolated features any one most certainly must recognize something above and beyond ordinary design in this relationship. Hydrodynamics enters into the mechanism of the peripheral circulation, as well as partial pressure and osmotic pressure, for the flow of blood to the trunk and extremities, the oxygen exchange that goes on in the capillaries, the transfer of food and waste material to and from the cells the capillaries serve. Edema of the extremities with right heart failure, orthopnea with left heart failure testify to the correctness of Newton's law of gravitation when the pumping engine breaks down.

Aerodynamics enters into our thoughts and conversation in these days when the question of lack of aerial supremacy made the difference for Malaya, Java, Bataan while its presence connotes Rostock, Lubeck, the Coral Sea. Aerodynamics likewise enters into this discussion in two ways. Thousands of years ago the emergence from marine environment to terrestial existence, the

ability of animal organisms to adjust to this change, was really a greater test of adaptability for survival that that which the deep sea diver, the pig boat sailor or the aviator has to meet today. The discovery of the principle of the bellows with alternating positive and negative pressure meant much to primitive man to keep his fire going. The Great Designer had already devised and perfected that principle in making the change from gills to lungs. Later He developed for man the machinery for partial voluntary control of pressure that is tied in with the ability to communicate with his fellows, the power of speech. The capacity for articulate speech is essentially a function of the central nervous system through the larynx, the mouth, the tongue and the upper respiratory tract. The mechanism that makes it possible is a combination of air compressor and vacuum pump. This is accessory to be sure to the more imperative need of getting oxygen to the pulmonary alveoli and carbon dioxide away from them. That transfer, like the transfer to and from the cells within the body, is definitely made according to the physical law of partial pressures. Speech is important to all of us, to some more than others, but even though it is our means of communication we should remember that it is an adjunct to the main power plant that suplies oxygen to the body.

The lower forms of animal life derive their food from their fluid environment. Terrestial forms likewise get their sustenance from their surroundings. These may be near at hand, as with the cow on pasture or may cause the animal to range far and wide as with the wild members of the cat and dog family. Early man got his food where he could find it. Sometimes he too had to travel great distances as in famine times when the tribes of Israel moved out to another land. The more complex social organization becomes, the more dependent it is on transportation for essential food items. Hence the introduction of blockade, submarine warfare, the necessity of maintaining supply lines, into our daily life and our consciousness of restriction of certain items to which we had not hitherto given much thought. Transport of materials, raw or fabricated, to the individual engines of the human body, the tissue cells, is equally important for the maintenance of their individual life and that of the body politic, the body as a whole. Ours is a multiple transportation system carrying protective forces, defensive forces and all the manifold supplies to the scene of action.

Every complex social unit has to have protective machinery. Our bodies are no exception to this. They have no control over the purity of water or food supply taken other than dependence upon the care and judgment of ourselves or others. They possess, however, an efficient control mechanism for the detection, detoxication and discard of products that might prove harmful. True these may be broken down by high concentrations as with mercury, carbon monoxide or any one of many inorganic or organic chemical substances just as the police, fire or disposal units may be broken down in blitz or other disaster. Under such circumstances the special services may be out of commission. Simpler and more primitive ones have to serve. A similar mechanism is seen for instance in acute nephritis when the complex glomerulo-tubular system of filtration and resorbtion is damaged. First the intermediate system of the digestive tract as a means of elimination is brought into play with vomiting and diarrhea as a method of excretion. Finally the primitive excretory organ the skin, corresponding to the cell membrane of the individual cell takes on more of a burden with increased secretion of sweat. Hence the therapeutic efforts to supply fluids to dilute toxic products, to improve elimination, to increase perspiration.

Some physicists feel that electrical energy originally from the ether is the ultimate in simplification; that everything else in the world or in the solar system is derived from that. Whether we agree with this idea or not there is no doubt that in our bodies electrical and electrochemical changes are very much a part of life itself. The electromyogram, the electrocardiogram and in recent years the electroencephalogram give graphic records of the presence of electric currents in vital processes. There is good evidence that the nerve impulse in central or peripheral nervous system is electrical in nature. Variations in electrical potential have been studied in connection with many types of cellullar activity such as fertilization, cell division, muscular contraction. We read a scale in terms of kilovolts at a power plant or at an X-ray control table; we read it in terms of millivolts on an electrocardio-

gram or electroencephalogram. We are interpreting units of electrical energy in each instance.

A comparison is frequently made between communications mechanisms such as the telephone and the nervous system. I like to think of the latter as being more inclusive, one combining the judgment phase of the human operator with the automatic selectivity of the dial switch board. Electrical energy enters into the utilization of both. The dial system is more mechanical, more certain and more economical for ordinary messages, for integration of various engines of the social or human machine such as have been described. We know, however, that if there is trouble or if a long distance call is desired the automatic machinery cannot take care of it. The situation is too complex. Higher centers, more specialized efforts are needed. Integration must be more complete. There the forebrain is needed. In thinking of utilization of electrical energy in the nervous system the title of Tilney's book comes to mind, "The Brain, The Master of Destiny." For after all what good is the machine if it is out of control? What value has the engine if the driver cannot master it? He is part of the machine, the machine is part of him. Diversified as the engines of the body are they must be integrated to serve it as a whole.

COMMENTS ON ALLERGY

Ralph G. Mills, M. D.
DECATUR

Allergy as a subdivision of Internal Medicine is growing by leaps and bounds. The millions of sneezers and wheezers have at long last gained some attention and considerable relief. Allergy has caught the popular fancy, and is being played up for universal attention by medical writers and speakers; by radio health advisors; by syndicated columnists and even by cartoonists. The professional funny man had his innings when hay fever was considered a joke by every one but the victim himself. Now its seriousness is being appreciated, and we realize that fully 60% of all inadequately treated hay fever sufferers eventually become asthmatics. A goodly number of these asthmatic patients develop some sort of pneumonitis, the commonest of which is bronchiectasis. That now means lifelong semi-invalidism.

The profound effect of the allergic state upon the body of a growing child has been emphasized by Todd, Cohen and their associates in Cleveland. Allergy affects chiefly the shock organ, which, in asthma, is the lung, but it also disturbs every organ and every function of the body. Personality, disposition, digestion, respiration, even the growth of bones and the contour of the face may be distorted. We must accept allergy, then, as a fundamental process, not merely a superficial or trivial affection.

The concept of allergy is widening every day. Many of the phenomena of sensitivity and resistance observed in various infectious diseases are fundamentally allergic in origin. These have been studied under the heading of immunology, but are now merged in the allergy concept. When bacterial allergy has been more widely accepted as a reality, the field will be widened still farther.

There was a stage in the evolution of this subject when an allergist merely scratched, then injected, and finally just sympathized with his hay fever patients. He little suspected that migraine, asthma, eczema, colitis and many other conditions also lay within his field, and hence should be treated according to specific methods. Now we find evidences of allergy in every field. The otolaryng-ologist who does not distinguish between inflammatory disease and allergy is failing to give the best type of treatment to his patients. Every type of specialist must now take allergy into consideration in diagnosis and treatment.

The time has long since passed when a few dozen dried extracts constituted a diagnostic kit, and when a satisfying conclusion could be drawn from their use. Nor can the general practitioner of today depend wholly upon a laboratory technician for sufficient help even in the average case of allergy. I have seen a letter written by a practitioner asking a hospital technician to give his patient "the tests for asthma." Needless to say the result was not sufficient to enable a satisfactory diagnosis to be made, nor

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to form a reliable basis for the subsequent treatment of this patient. The implication of specificity is unwarranted.

An equally unscientific phase of the problem is the use of scratch tests by all sorts of irregular practitioners. It has even come to the point where the safety of certain cosmetics and hair preparations is determined by patch tests which have been entrusted to the customer for self application. Allergy has long since gone beyond the stage of scratches and bumps, and is now a complicated science, in which experience and judgment are of utmost importance. Even yet the impression is current that every scratch which is followed by a bump indicates allergy, and that a catalog of these reactions is a reliable index of sensitivities, and that a diet based upon this index is an infallible guide to health.

Many advances in allergy are being made, but time permits mention of only a few. Molds, mildews, rusts and smuts are assuming tremendous importance as causes of inhalent allergy. Many such cases of sensitivity were previously thought to be ragweed hay fever, sinus disease or just rhinitis, and disappointment followed when treatment was misdirected. Many papers on these subjects have been written, but progress had been made only by individual effort. This has been sufficient, however, to establish the validity of these bodies as allergens, and to lay the foundation for rational diagnosis and treatment.

I would direct your attention to the activities of the Association of Allergists for Mycological Investigation, a group of allergists who have been working quietly for the past three years and who have recently issued a report of their findings. There are now 31 members, scattered over the Eastern half of the United States, most of whom are now or have been engaged in the collection of data on the incidence, distribution and identification of molds. Culture plates are exposed, twice monthly, on the tops of tall buildings for two minutes, and are then sent to Dr. Marie B. Morrow at the University of Texas for identification of the molds thus collected. The University of Texas has cooperated generously in this project, and has granted time, funds and a scholarship for its continuation. Many allergists, chief of whom is Dr. Homer E. Prince of Houston, Tex., have given immense amounts of time and energy to this cooperative effort.

In this region data is being collected from Evanston and from Decatur in Illinois, and from St. Louis just across the river. Years of systematic observations will yield valuable information as to the molds that prevail at certain seasons of the year and under what meteorological conditions they may be expected. Already a large list of specific test and treatment materials and extracts have been prepared for use in the study of the molds as an important cause of human disease.

Allergy is not strictly confined to humans, as was once supposed. Dr. Fred Wittich, of Minneapolis, Minn. has described a typical case of ragweed hay fever in a dog, in which the familiar phenomena of induced symptoms and relief with adrenalin have been duplicated. A Movie film of this dog is completely convincing. Other cases have been heard of and are being investigated. It is hoped to study the question of heredity of allergy in animals by this means.

The oral administration of pollens for the relief of hay fever is still under investigation. The Chicago Society of Allergy protested two years ago against the commercialization of the method by one company, but the protest went unheeded. Many articles have appeared on the subject, and a certain amount of success has been achieved in some cases. Gastric distress has been noted on one hand and lack of success on the other. Many more trials will be needed before a final statement can be made. Obviously this method is also open to the objection that it is not likely to be preceded by an accurate diagnosis, just as is usually the case with the fixed-dose sets for hypodermic administration as prepared by various companies. The element of flexibility and adaptability of dosage is lacking in both methods, making it difficult to adjust the strength of the pre-determined doses to the individual who is influenced by various physiological states: by menstruation, by temperature, and by various meteorological variables. Failure to take these factors into consideration is conducive to systemic reaction on the one hand, or if the set is less potent, to lack of relief on the other. Obviously the oral method is not the full solution to the problem, nor may it even prove to be a trustworthy substitute for

injections in the simple cases of sensitivity to ragweed pollens.

The practise of trying to find a specific antigen with proved casual relationship to allergic disease is now well established. Treatment has been attempted by total abstinence, by gradually increasing amounts given orally, and by hypodermic and intracutaneous injections of extracts of all sorts and potencies. Results are often good in simpler cases, but have been disappointing in many instances of multiple sensitivities. Even at best the prognosis is uncertain, as the same sensitivities may return or new ones may be added. In other words the allergic background persists.

Dr. John M. Sheldon of the University of Michigan, and his associates, Johnston and Howes,* have within the year published a study on histamine-azo-protein in allergic disease. This is predicated upon the assumption that histamine is liberated from tissue cells as a result of the inter-action of antigen and antibody. The histamine is assumed to be the cause of the symptoms. Elimination of the histamine by neutralization with histaminase or by building up antibodies specifically against it have been tried, but with very little success.

Histamine can combine with protein *in vitro* to form various compounds, and these have the power to produce antibodies against the combination which would not be the case with either alone. Apparently these antibodies will neutralize any histamine present, no matter by what means it has been produced. If successful there would be produced a non-specific type of immunity which would dispense with "shots" and other types of specific treatment.

Histamine was coupled with various substances of low antigenic power, and finally with despeciated horse serum globulin (this process removing all danger of anaphylactic reaction) by means of an azo (NH) linkage. The compound contains no free histamine, but in the linked form there is as much a I mgm. per cubic centimeter.

This compound is not a panacea, but the first reports suggest the value of further study. In ragweed hayfever, for example, the results from its use alone seem to be about as good as those with pollen extracts. In Physical allergy and in cases of skin hypersensitivity the best results have been noted. This histamine-azo-despeciated-horse-serum-globulin has been used alone in most instances, but in conjunction with local remedies in skin cases. Apparently the size of the dose bears no direct relationship to the amount of relief obtained.

Several of us have been using this material in selected cases and the results seemingly justify further study and effort in this direction, in the hope of finding a really effective non-specific desensitizing agent that would free the allergic patient from his vulnerability to antigenic exposure.

*Sheldon, J. M., Johnston, J. H. and Howes, H. A. "A Clinical Study of Histamine azoprotein in allergic disease." — Journ. Allergy, 13, 18-27, 1941.

THE MALE CLIMACTERIC

Clarence H. Boswell, M. D.
ROCKFORD

It is difficult to make this subject a topic for serious discussion, and my effort will be merely to review the recent literature and prevailing opinions; from these I shall borrow freely.

Is there such a thing as a male climacteric? If so, at what age does it occur; what physiologic changes produce or accompany it; what symptoms represent it; how may it be diagnosed; need it be treated; with what success and by what methods? These are some of the questions which one is apt to ask and which I will try to answer, using the opinions and experiences of other as well as my own.

The word Climacter is of Greek origin and means a round of a ladder. Climacteric implies a period in human life in which some great change in constitution or health takes place or is supposed to take place or be especially likely to occur. As we use the term we mean the period when sex function declines and ceases.

In the female this decline is very obvious, appearing as an irregularity and then a discontinuance of the menstrual flow and usually a termination of child bearing. Because no such striking event occurs in men, the presence of this period is doubted, overlooked, or ignored. However sex decline in men does set in, usually at about 48 years of age, and advances with

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varying rapidity, depending upon the individual. This change is usually slow and prolonged and without evident disturbance. However sometimes a typical climacteric syndrome occurs.

It is generally conceded that the symptoms of the male climacteric are not severe or debilitating but that they do lessen the patients activity, and are therefore important from a social and economic viewpoint. Executive and professional men are more analytical and hence recognize their deficiencies more keenly than the laboring man.

Among the climacteric symptoms most often experienced are:

1) Loss of force of the urinary stream.
2) Decrease of bladder neck function, even to partial incompetence.
3) Vague pain over the bladder.
4) A lowered basal metabolism.
5) A generalized feeling of uncertainty.
6) Decreased libido and potency.
7) Changes in size, shape, consistency and secretions of the prostate gland and seminal vesicles.
8) A group of symptoms very similar to those suffered by women: hot flashes, profuse perspiration, chilliness, tachycardia and palpitation on moderate effort or even in bed; emotional instability, irritability, moodiness, decreased memory, decreased power to concentrate, a desire to be left alone, depression.

These symptoms may occur frequently or irregularly, and there may be short periods of freedom interspersed. The patient often experiences a feeling of uncertainity; he is unable to make decisions which were formerly prompt and fearless. He explains that he is becoming more conservative. Fatigue is a most frequent complaint; it is more than ordinary, both mental and physical, and may follow any routine exertion. Short rest periods formerly refreshed him; now he arises tired and fatigued. Sexual intercourse is followed by marked fatigue.

The cessation of menstruation does not necessarily imply a complete loss of sex desire in women; neither does decreased gonadal activity in men lead to a total loss of potency or libido. Evidence however shows that in men a beginning decline in potency appears at about 50 years. This decreased sex power always affects a mans psychic attitude toward intercourse. In an effort to hide his shortcomings and to obscure the real state of affairs, he assumes a voluntary indifference or distaste for sex relations. This symptom of decreased libido must be properly evaluated, as it is usually one of volition, and on a mental or psychic basis.

Bladder disturbances often bring the patient to the doctor. A dull ache over the bladder and in the inguinal region, a loss of force of the urinary stream, a tendency to difficult starting of the stream, a terminal dribbling, early arising with urgency. These symptoms are present without any residual urine, with no increase in total urinary output, no lowered specific gravity, and no bladder infection.

The prostate is firm, smooth, enlarged, boggy, lacking in usual tone; there may be varying degrees of prostatitis, and the expressed secretion filled with debris, immobile spermatozoa, and frequently clumps of pus cells.

The period of life from 45 to 55 is one of attainment; at this time a man has shouldered great stresses, great responsibilities and unusual activities. These demands produce nervous and physical fatigue symptoms which are concommitant with those of sex decline and lead to confusion in differentation. Early nephritis, gastric neurosis, business anxieties, family responsibilies, cardiac degeneration, all must be differentiated, and their weight, as coexisting ailments, must be appraised.

We may receive some help in diagnosing this condition by the presence of subnormal amounts of androgens in the urine. Androgens are chemical substances extracted from the human urine, which posess pharmacologic properties similar to testicular extract. These androgens may be assayed by injecting into capons and measuring the growth of the comb. They are present in urine in varying amounts, depending upon the individual and upon his age. There seems to be a universal fall in the amount of androgens as sex functions decrease with age, and the amount found at any time serves as a fairly reliable guide to the degree of testicular activity present. Hypogonadism of whatever source may be treated by injection of testosterone, and the increase of urinary androgens found seems to parallel clinical improvement.

Much progress has been made in recent years in the study of the male hormones. A strong testicular hormone, testosterone, has been isolated, refined and now synthesized; as testosterone proprionate it is readily soluble in oil; it

is then administered by weight and by hypodermic injection. As a mixture with wool fat it may be applied to the skin. As methyl testosterone, it is available for oral administration. These last two forms are claimed to be effective but the dose must be much greater, and in the present form their use is not popular.

Testosterone is now widely used as a replacement therapy in hypogonadism and numerous reports claim it is effective in relieving nervous and mental symptoms; the relief is greater with those showing greater gonadal deficiency, and the success seems proportionate to the dosage administered, 30 to 150 mg weekly seems to give best results. As the therapy is one of replacement, the symptoms may recur as the deficiency returns. Favorable results include increase in physical energy as well as ability to sustain physical effort over greater periods of time; a greater mental ability to concentrate and to fulfill social and economic responsibility. Mental quietude and repose replaces previous irritability; the patients anxiety is lessened as circulatory symptoms improve. Benefits are not always rapid; but striking improvement sometimes follow the first few injections of the hormone. The usually accepted treatment consists of injections of 10mg twice a week for 10 or 15 doses. Larger amounts may be indicated in severe cases. The treatment should be considered one of replacement and should be discontinued as soon as symptoms abate. Over-treatment and prolonged treatment may result in unpleasant sequella.

CASE I

Professional man, age 50

About two years ago the patient began to complain of an unusual fatigue, accompanied by hot flashes and weak spells. He was under a heavy financial load, found himself unable to make decisions, and had no power to concentrate. He was treated in a sanitarium and by long periods of rest away from home, with varying degrees of improvement. Finally last Fall he was put on injections of testosterone proprionate 10 mg every 4 to 5 days. He experienced an immediate improvement and soon returned to work. At present he is receiving 10 mg every two weeks and is entirely free from symptoms. He works full hours at his office, attends to his garden and plays golf regularly. His libido and potency, which were absent during his illness, are now normal.

CASE II

A Professional man, age 51

For years he has had many responsibilities but always took care of himself, getting ample rest and relaxation. In 1936 he complained of unusual tire and exhaustion, although he had no extra duties and was getting 8 hours of sleep at night. He had an uncertain feeling on walking, and a feeling "as one has after taking a drink on an empty stomach". He was given gynergen for migrane headache, iron and vitamins for a mild anemia, but his fatigue persisted. Because of an admitted failing sex desire and low potency he was given weekly injections of testosterone. At the present time he is feeling fine, is able to do his work without fatigue and is much more calm and confident and is satisfied with his sex powers.

CONCLUSION

Some male adults show a decline in sex function, appearing at about 50 years of age, accompanied by nervous and circulatory symptoms which are mitigated by treatment with male sex hormone.

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A PRIZE FOR GOOD HEALTH. EXTENDING THE 4-H PRINCIPLES TO ADOLESCENT YOUTH

Maurice L. Blatt, M.D.

CHICAGO

A concept has been widely circulated inferring that our potential military man power is seriously handicapped because of physical and mental defects discovered in the course of the medical examination of selectees. This inference is based upon an erroneous premise, namely that a soldier must be a physical and mental athlete. It is implied that unless he fulfils those conditions he is of little use in the defense of his country, and is a drag on industry. Nothing could be further from the truth. On the other hand, it is self evident that every individual would have a fuller life if he had a sound mind and a healthy body. It follows as a corrolary

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that society as a whole would be benefited by his greater efficiency. It is evident that there would be fewer indigent dependents in a society in which the physically and mentally handicapped were reduced to a minimum, and it is equally evident that from such a society an army of superior men could be recruited. It is this phase of the problem of "Medicine and the War" that I wish to discuss.

It takes a cataclysm such as the present war to make us pause from our regular routine long enough to evaluate our medical and social situation. We take stock of our man power. We analyze its numbers, physical condition, mental make up, and psychic response to the stimulus of the greatest event of our generation. We have been striving to put into effect the precepts of applied Christianity, and in doing so, the medical profession has had as its sole aim the alleviation of suffering, the prevention and cure of disease, and the prolongation of life. It has cared for the poor as well as for those able to pay. The medical profession has saved the lives of many persons, but in many instances the diseases from which they suffered have left stains, some removable and others indelibly fixed. Those of us who devote our professional lives to the prevention and cure of disease during childhood, point with pride to our results. We have materially reduced illness and mortality in the first two years of life. In doing so, we have saved many valuable lives, but, on the other hand, we have also saved the lives of many children born with irremedial mental and physical defects. The pediatrician has been instrumental in increasing the span of useful human life by accepting a position of leadership in the prevention of disease. He has been active in reducing the incidence of infectious gastrointestinal diseases, small pox, diphtheria, scarlet fever, whooping cough, lockjaw, typhoid fever, tuberculosis, rickets, syphilis and gonorrhea. The crippling organic complications following these diseases often are not evident until adult life. The elimination of these diseases and their complications has removed many of the factors which in the past have prevented adults from taking their proper places in our social and economic structure. However, a survey reveals many defectives; many of these would not have survived in a previous generation, but most of them, in spite of their defects, are able to assume a satisfactory position in society. One hundred years ago, the percentage of survival of the handicapped was inestimably less, the mortality rate from diseases due to improper infant feeding was one hundred times as great as it is today. The examination of selectees by the draft boards affords an opportunity to evaluate the end results of our efforts.

After the First World War a statistical report was made by the Surgeon General of the United States Army on the defects found in our recruits. A comparison of those tables with the findings in this present group of selectees will be most interesting, but unfortunately is not yet available. If, as Dr. George Crile and others have suggested, war is the principle occupation of man, these defects seem to assume a somewhat more serious significance than that which they present during rest periods of peace. At the beginning of this war, the selection of the military personnel was based upon the presumption that every individual in the service must be physically capable of heavy labor, have the eyes of a sharpshooter, the heart, muscles and build of an athlete, unimpaired hearing, and a minimum number of natural teeth. The percentage of men who are disqualified under these conditions is comparatively large. Many of those disqualified are successful in peace time pursuits, and would be found equally useful in military life since there are many positions that can be as well filled by individuals with limited disabilities as by their more perfect brothers.

It was my good fortune to serve with large bodies of troops during the last war, and as

Table I

1000 Consecutive Draftees — August 7 to December 18, 1941

14 Local Boards

Maurice L. Blatt, M.D., Chairman

Accepted — A1 — 578

Rejected 422

A.	Rejected With More Than One Defect		84
	All Defects Correctable	41	
	One or More Defect uncorrectable	43	
	Preventable Defects	2	
B.	Rejected With Only One Defect		338
C.	Total Number Of Defects		520*
	Preventable	144	
	Correctable	359	
	Uncorrectable	161	

chairman of both a local draft board, and a medical advisory board in this one. A tabulation of the defects found in 1000 consecutive selectees examined between August 7 and December 18, 1941, is shown in Table I. An analysis of the defects presented in the table demonstrates that certain groups were preventable, some were correctable, but others must be classified as either unpreventable or uncorrectable or both. Of the 1000 men examined, 578 were accepted and 422 rejected; 338 because of one, and 84 with more than one defect. One hundred forty-four of the defects found were classified as preventable, 359 as correctable, and 161 as uncorrectable.

Table II

1000 Consecutive Draftees — August 7 to December 18, 1941 — 14 Local Boards
Maurice L. Blatt, M.D., Chairman
422 Rejections

	Prevent	Correct	Uncorrect
Abd. Wall	2	24	2
Heart		6	51
Bld. Vessels		16	1
Cord			9
Brain	1	1	10
Nerves		1	1
Ears	15	13	19
Eyes	1	119	15
G.I.	2	9	1
G.U.	19	27	8
Muscles		1	1
N & T		1	
Bones	1	7	18
Joints	5	10	19
Skin	1	3	2
Teeth	38	47	
Lungs	22	28	1
Syphilis	4	4	
Thyroid		5	1
Weight	33	35	
Others		2	2
TOTAL	144	359	161

In Table II, the incidence of the preventable, correctable and uncorrectable defects is shown by systems. Many of these defects are both preventable and correctable. The largest number of preventable disqualifying defects was insufficient teeth for satisfactory mastication. An increase in dental care, mouth hygiene, and proper diet would have prevented this disqualifying factor. Thirty-three were disqualified because of irregularity in weight. Most of these were very much over weight, an easily preventable factor. Twenty-two had preventable lung findings. Among the correctable defects, poor vision due to errors of refraction lead the field with 119 instances. These men could be brought up to a useful standard with suitable lenses; not the high standard needed for field service in the army, but more than adequate for a clerical personnel either in the army or in industry. Army standards should be altered so that this group could be accepted for limited service.

Based upon a medical survey such as this, it seems logical to conclude that an effective plan for reducing, and, if possible, eliminating the incidence of preventable and correctable defects is needed. It should be a part of our school curriculum.

In a recent article on Medical Economics, Packard[1] states, "medical care is an essential part of our social and economic structure." Wright[2] at a meeting of representatives of the Boys' Clubs of America, calls attention to the fact that, "There are no priorities on health, and it is an easy commodity to sell in any community that has the interest of its future citizens in mind." Tooley[3] at the same meeting, advocated the institution of; 1. Health Service, defined as an early physical examination and a follow up service to insure the correction of remedial defects by the family physician or social agency responsible for the child; 2. Health Supervision, the detection and elimination of undesirable environmental factors; and 3. Health Instruction.

The Children's Charter, adopted at the White House Conference on Child Health in 1930, advocates, "Health protection from birth through adolescence, including periodical health examinations, and where needed, care of specialists and hospital treatment." Hiss[4] advocates following the 4-H health program. The plan consists of (1) Health Education, (2) Health Preservation, and (3) Health Restoration. "National Health Scorings" are presented each year at the National 4-H Meeting, held in conjunction with the International Live Stock Exposition in Chicago. The health score cards were devised for the 4-H Club by the Bureau of Health Education of the American Medical Association, and the Elizabeth McCormick Memorial Fund. The 4-H Clubs are active in rural

communities, and the Boys' Clubs of America are active in the cities. The Boys' Club "Health Manual" may well serve as a guide for any organization.

The Y.M.C.A., the C.Y.O., the J.Y.O., the "Scouts," and numerous organizations based on racial groups are interested in athletics. Many of them have provision for health supervision. The medical profession must encourage a broadening and deepening of this interest.

The acient Greeks stimulated interest in the development and maintenance of health through organized gymnastics. Hippocrates, in 400 B.C., improved the system which Plato had stressed previously as a necessity in the training of the Greek youth. The ancient Teutonic race were equally interested, and until the end of the Middle Ages, athletic meetings were common in Great Britian. An active revival of interest in gymnastics under the leadership of F. Ludwig Jahn, "Father John," occurred in 1811 in Prussia, and in 1813 in Sweden under Ling. Father John's Turnerplatz formed the background for the Turn Verein which played an important part in early American physical culture.

In the United States, we have been prone to take our gymnastics vicariously. Antagonistic team competitions such as base ball and foot ball attract large groups who sit comfortably and watch a few athletes at work. Competitive mass gymnastics should be reintroduced into our public, private and parochial schools. This should be preceded by a physical examination of the students, carefully conducted, using a standard form for recording. Parents and the family physician should be informed of the need for corrective measures. Later the family physician should be contacted and asked for a report on the child's health. Provisions should be made for the medical care of the indigent and for other children without a family physician.

Mass gymnastics is followed by improvement in physical development. Competition between large teams needs to be developed, first within the city and then nationally. Fitting exercises would prevent many postural defects. Physical examination would reveal many children with carious teeth, hernias, and similar remedial defects. After their correction, these children would join the gymnastic group. Children enjoy displaying their physical prowess, and with very little encouragement this movement would popularize itself. Many individuals now negligent would become health conscious.

The school gymnasium must again become the center of a health program for the children of our nation. The responsibility for the institution and success of this program falls upon the shoulders of the medical profession. It is our duty to advise our children and the members of our school boards, individually and collectively, in matters of health. The public and the government are interested, and the time is opportune.

CONCLUSIONS

1. One thousand consecutive selectees were physically examined by my Board between August 7, and December 18, 1941.
2. Five hundred seventy-eight were classified according to the U. S. Army standards, as A1; 422 were rejected.
3. There were 520 defects found in the 422 rejected applicants. Three hundred fifty-nine (69%) of the defects were correctable by medical and surgical means.
4. A uniform and systematic physical examination of all children in public, private, and parochial schools is needed in order to correct these defects at an earlier age.
5. Mass gymnastics preceded by a yearly physical examination should constitute a part of the curriculum of all schools. This will stimulate interest in health problems.
6. When defects are found, parents and guardians of children will be notified. The family physician, or public agency responsible for the institution of remedial measures, will be contacted and a progress report requested.
7. The health of the individual will be improved, and the industrial and military strength of the nation increased by the institution of systematized gymnastics, physical examination and corrective therapy.

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SOME VISUAL PROBLEMS IN MODERN INDUSTRY

HEDWIG S. KUHN, M.D.
HAMMOND

The physical requirements that Industry of necessity sets up for it's human staff to meet, are rapidly changing and are increasingly seen to be akin to aptitudes of mind and body. Visual performance is being scrutinized in Personnel and Training Departments. It has taken a prominent place in the study of production statistics, and of course, is very important in reducing accidents. Visual deficiencies make for awkwardness, and an awkward man is an unsafe man. We saw very early that the concept "visual performance" or "Eyes for the Job" and the acquiring of information relative to the binocular visual machinery had to supercede the notion of merely recording acuity. It was because this was practically untrodden territory that we had to set up our whole research project dealing with the appraisal of vision in industry.

On the basis of the data secured from the original survey of 16,000 men, we set out to define and evaluate the several factors pertinent to visual functions and its relationship to Industry. Other surveys and studies adding new types of problems now total some 25,000 to 30,000. New spearheads, new ideas and objectives have emerged. Further work is now being carried on by interested collaborators and the channels go in many directions. There have been some rather startling explosions of supposedly solid concepts and some very timely applications to our war production.

New developments have arisen for several reasons: 1. Through the application of basic statistical, analytical methods, to the problems involved (a procedure not commonly used by the medical profession). 2. By combining the ideas and methods of industrial psychologists with those of a purely medical analysis. — (It has been amazing to discover how much more effectively one can escape a dead end by careful mathematical checking). Conclusions reached where vital contributing factors have been overlooked often serve to nullify endless days of work. 3. By winning the whole hearted interest and support of Management who not only opened the gates of Industry but frankly laid their actual problems and specific tangles before us at which to work. We kept our feet fairly well on the ground. It is one thing to develop a theory in one's office or laboratory and foist it onto Industry; it is another to sit down and solve "on the spot" the actual needs as assigned to us. This is exactly the way a chemical or engineering "problem" is turned over to the Research Laboratory of an industry. I believe these challenging requests for help here, there, and everywhere, in every conceivable type of industry, have given us a decided advantage. They have served to sharpen our focus, to give impetus to the effort, and to channel the work towards essentially practical and immediate ends.

Everywhere in Production, in Government organization, in present and future urgencies, and rightfully in Medicine, it is no longer WHY but HOW. We have no time to use our former slow plan of "Ivory Tower" cogitation and spend hours or days in studying; although we fully realize that we shall make many mistakes, which later, less hurried research will correct. We must seek every conceivable technic to do better. We must try to keep an open mind in interpreting and appraising. The pragmatic test of "will it work" has for the time being forced the reluctant clinician to waive his "500 cases set up to prove this." And, his year long contemplation of a drug's action is often impossible. Try it now! In this way did the Medical Staff at Pearl Harbor proceed, and the results of their bold plunges into mass use of the sulfanilamides etc. saved many. In one immense step — action at the front — new ways, not theories were revealed, and the results were startling.

Speaking more specifically of our assigned topic, three special items need to be considered. Too long there has been an unrecognized gap between the eye man practicing clinical ophthalmology in an industrial community and the eye man adding to this clinical knowledge, a true comprehension of the industrial ophthalmological tangles involved. This additional service must cover a field for which industry itself makes its own blueprint of needs and desires. (In this entire discussion, I am not referring to the care of eye hazards or the field of eye acci-

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dents, etc.) May I here make a very harsh but realistic statement and underscore it heavily. Industry cannot use now, or ever, in the light of the developing scope of service, an Ophthalmologist (except as surgeon and compensation consultant) who does not actually enter the plant and make himself thoroughly familiar with the varying patterns of those industries he is responsible for; who does not study each and every job, distances of work, physical environment, and the necessity of judging space relations. Then he has the task of classifying this information for himself and management into simple job groups as related to visual requirements. It might well be asked, "How does industry specifically need the knowledge and services of an Ophthalmologist in these other fields of visual skills?"

1. Industry needs its ophthalmological consultant to set up for it and its general medical examiner; (if it has one) standards — visual of course — for (a) the selection of employees, (b) the placement of employees. This is a comparatively simple but extremely useful service now that we know something about the variables of visual functions.
2. The Industrial Ophthalmologist must teach preemployment examiners a battery of convenient but adequate visual performance tests in the light of the demonstrable relationships between visual factors and job performance. Later, when the new instrumentation is available, technicians will be specifically trained, perhaps even certificated, in order to keep the entire program under control, and scientifically accurate.
3. The Industrial Ophthalmologist must, for instance, find that spot in a given plant where a color blind person can work as safely and as efficiently as one who is normal in this regard. We must place other applicants with various visual defects in job niches where they can serve effectively and safely.
4. The Industrial Ophthalmologist must discover and cull out for special attention, those jobs that require operators with perfect binocular function no phorias, no serious lack of stereopsis — both for safety's sake (crane operator) and for efficiency's sake. (Inspectors)
5. The Industrial Ophthalmologist must spend time studying special close jobs, so he can really select and evaluate close work jobs — inspecting, threading almost microscopic apertures — checking calibrating instruments, etc. where special reference to efficiency and accuracy is vital.
6. The Industrial Ophthalmologist must perfect and standardize near point tests on which now so critically much depends.
7. The Industrial Ophthalmologist must correct the visual refractive errors of the industrial employee-patient, for his job-needs during his working hours. If necessary, he can be corrected differently for his non-work hours (example — myopes in 8″ looping job in hosiery industry).
8. The Industrial Ophthalmologist can through an acquired knowledge of statistics and their application to production analysis, demonstrate to Management the direct relationship between visually carefully selected operators, their production capacity, and their accuracy.
9. The Industrial Ohpthalmologist can show industry *also* how to rehabilitate, improve and train the ineffective workers already on the payrolls, and how to prepare applicants in a world of tightening labor markets. — (Occupational glasses, orthoptics, correction of distance refractive errors; use of hardened corrective goggles instead of cover-alls; study of glare factor (occupational polaroid): eye fatigue due to secondary anemia; hypothryoids; foci of infection, etc.) Orthoptics under the pressure of the war danger has stepped out of the world of only training grade school children with squints into one of putting a crane operator back on his crane, or a flyer into the air. If you give your patient a careful physical check and look for — teeth, sinuses, poor breathing due to deviated septum, nasal allergies, low hemoglobin, low blood pressure, over or under weight, nervous fatigue — and correct any or all of these, you will find orthoptic training is a very satisfactory and important part of your work, designed to meet the requirements of occupational visual skills.

These are a few of the ways that the Ophthalmologist practicing in an industrial community can and must serve the interests of Industry directly in addition, of course, to his meticulous care and study of each and every regular private patient whose eye health is now so vital and who is in need of potential skills.

One very fascinating offshoot has grown out of the original blueprint of evaluating visual factors in industry — and that has been the final complete explosion of the idea that one is or is not color blind. Professor Tiffin is to read a paper based on some of our data on color discrimination in Industry before the ophthalmological section of the A. M. A. in June. Briefly, we found four levels of difficulty; color vision (like acuity) is seen to be a matter of degree, both qualitatively and quantitatively. And, by this new angle we demonstrate the difference between using the statistical approach to individual differences and the physiological picture

itself. Therefore, a scale of color *appreciation* (not of color blindness) is important in the selection of employees for some jobs — example, the man who expects to be given a five to ten year training in order to do color printing needs to be chosen from the very highest levels of color appreciation. The tractor driver who needs only to be able to recognize red and green signals can be picked from lower levels. The need for a *graded* color test (which is now being developed) is very important. The inclusion in the employees visual record of a more exact estimate of color appreciation is indicated even where the importance of color is as yet, not easily demonstrated.

It became apparent, both throughout the entire Research Project itself, and as revealed later by the innumerable consultations and problems handled by the Joint Committee of Industrial Ophthalmology, set up by the A.M.A. and the Academy of Ophthalmology and Otolaryngology, that there is both a great need for establishing standard eye tests and methods of procedure in evaluating industrial efficiency, — and a great need in providing the framework for their use. There must be a clear-cut program for the application and interpretation of tests and procedures. There must be, of course, continuing effort by all interested and capable scientists studying vision. The members of the Joint Committee have been making Herculean efforts under the leadership of Dr. Snell and certain basic facts have been agreed on, namely:

1. The absolute necessity for a scientifically accurate *battery* of tests for appraising the visual skills of large numbers of employees; such tests to be made in the plant and applicable to the specific visual demands of each plant. The record in each instance must include:
   distance acuity, (with and without glasses)
   color discrimination,
   muscle balances for distance and near,
   stereopsis,
   near point tests, including N.P.A., N.P.C. acuity

   In our opinion, the tests must be based on a technic that is standard and fool proof, and achieves reliable recording. No present single instrument fulfills the requirements of the Committee. The new Bausch & Lomb instrument as developed to date, seems to meet our requirements.

2. The Committee emphasized the need for learning how to incorporate the use of statistical and analytical methods in the study of efficiency. This, so, that both Management and the Industrial Ophthalmologist can *know* and not guess, that their program, refractive correcting, establishing of do's and don't's, have a factual basis.

3. The Committee recognizes the urgent need of breaking down purely arbitrary visual employment requirements (even to the extent of trying to educate the Insurance Companies and compensation courts). In Dr. Snell's words, taken from his fine paper, "Sub-normal Vision and Occupational Aptitude," "Visual aptitude depends primarily on the nature of a specific job and the minimum degree of visual efficiency required for its effective accomplishment."

4. We have also seen the need of establishing a much closer working tie between Management and Ophthalmology. The doctor has a second college education before him as he unravels the headaches of Management and the troubles of the employee, but he is rewarded by an appreciation of the complexities of that fascinating world — Industry.

5. And, last, because it requires special emphasis here and must be developed for a moment, the Committee found an amazing laxity in the use of near point tests as a routine procedure. It also found that the technic used by the profession in the field of near point examinations was inaccurate. The setting up of more rigidly standardized *near* point tests, which does *not* necessarily mean *special* equipment is important. Much can be done with simple procedures. Near point tests are a very great weakness in the routine technic of the eye doctor today; such a weakness in the presence of the vital problem of close work in industry is especially dangerous. Near point tests should include in order of importance;

1. *Near point of Acuity* — Near point of acuity measured as by three principle methods; ("Jaeger"), (Diopter or Meter), and (Snellen at 14").
2. *Near point of Accommodation* — Near point accommodation should be measured, right eye, left eye, both eyes — and difference in right and left measurements should be accounted for. The Prince Rule or even simple push-up methods are satisfactory. (letters to blur)
3. *Near point of Convergence* — The push-up method is used mostly — the targets may be any small (about 5 m in diameter) object requiring some accommodative stimulus, the normal break being about 3" or .8 centimeters.
4. *Phoria* — Many methods of phoria measurement — (cover and parallex where patient notices movement) are satisfactory if no special equipment is available or one can use the special slides in the new binocular instrument when it is available.
5. *Ductions* — (Prism Convergence and Divergence and Positive and Negative relative accommodation. (Difficult to get accurate measurement without special equipment).

Any marked deviation from the normal in any of the above tests may be the basis of visual disturbance — unless lens Rx improves these findings. The ordering of this lens Rx in itself may be of little value in correcting the difficulty.

SUMMARY

The Ophthalmologist practicing in an industrial community; and especially those eye physicians acting as consultants to war industries, have an immediate responsibility — to roll up their sleeves and work with Management *inside* the gates of industry; to bring to the war effort the latest understanding of visual safety and efficiency; to designate the choice of manpower and it's effective placement; to study production results and unearth new unsuspected relationships; between eyes and accuracy; to think and work *hard* on modernizing the present loose technics of the near point tests; and finally, through realizing all of the above objectives, to add immensely to the all too meager information that Ophthalmology in general now possesses in the field of visual performance. In so doing, we can make our contribution to the War effort at home by serving Industry, the greatly augmented clerical staff in government offices who work under such high pressure, and by preparing men to meet the visual requirements for Service in the Armed Forces.

GRADUATE EDUCATION IN NEUROPSYCHIATRY
A PROPOSAL FOR A CHICAGO PLAN

ROY R. GRINKER, M.D.

CHICAGO

A presidential address is usually a chore to write and a punishment to hear. Yet I, especially, feel in duty bound to maintain this society's tradition, since it was revived in 1926 by my father, Julius Grinker. Presidents are expected to look backward with sad sentiment upon the glorious productive past of their specialty, view the present (especially its economic features) with alarm or predict the accomplishments of the future. Some renounce past attitudes as when a neurosurgeon becomes a neurologist but I have already published my own apologies, on graduating from the strict isolationism of organic neurology to dynamic neuropsychiatry. Truly I have been grateful for the honor and privilege of presiding at your meetings this past year and as a last perogative I beg your attention to my thesis this evening. It concerns a practical matter, long latent in my mind and struggling for utterance. — *"Graduate Education in Neuropsychiatry — A Proposal for a Chicago Plan."*

Not quite a decade has past since a veritable deluge of special articles appeared in our periodicals under the title of "The Training of a Neurologist." Walshe, Brouer, Penfield, Riley and Hunt, by invitation, presented orthodox points of view. These articles with their wishful attitudes and exhortive note were indicative of a difficult and perplexing age for neurology, only recently severed from its umbilical attachment to internal medicine and psychiatry and already confronted with intense sibling rivalry. Neurologists were severely threatened even then, for Riley mentions that infantile paralysis, syphilis, blood dyscrasias, convulsions and psychoneuroses were in danger of being separated from the specialty. This threat has become a much greater reality since, in addition, all infections of the central nervous system, vitamin deficiencies, neoplasms, autonomic disorders, traumatic conditions, psychosomatic problems and a host of

Read as the Presidential Address before the Chicago Neurological Society April, 1942.

other categories have been, at least partially, taken over by others.

To survey the field of clinical neurology with the attitude that we should circumscribe what belongs to us by virture of arbritarily staked off prior claims is a grave mistake. It is useless to decry the raids made upon our pastures by bandits from bordering specialties. Infectious diseases, syphilis, neoplasms, etc. of the nervous system are diagnosed and treated by others who will continue to do so as long as they function in some manner better than we. Every loss from our field has been with good and proper justification. Others have advanced the investigation and progress in diagnosis or treatment, their practical therapy has been more efficient, or they have given promise by more optimistic attitudes that therapeutic results may be achieved, although not always produced. Often we have completely neglected the subject that we claimed as our property. Whenever problems arise in our lost domains that require our investigation, skill in diagnosis or rational therapy be sure that we still participate. There is more than enough for all of us to do and much that needs painstaking observation and investigation. Someone has erroneously stated that divisions of medical specialization are based upon technical advances in therapy. If this were true, medical neurology in its adolescence is accused of being a still-birth.

Instead of the aforementioned proprietary attitude a reasonable survery of neuropsychiatry should anticipate breaking down existing barriers, destroying the fences surrounding the specialty and determining what nurture may be interchanged with tangential fields of biology and medicine. The era of isolated scientific disciplines has long since past, obvious to those who have followed the progress in the physical and biological sciences. Likewise in neurology, anatomists are engaged in physiological research, neurosurgeons become neurologists, neurologists turn into neuropsychiatrists and psychoanalysts become social scientists, etc. The fact is that neuropsychiatry has ramifications in all of medicine and biology but its channels for interchange of ideas back and forth are too shallow and need deep dredging. Certainly sharp divisions and restricted subspecialization within the field of the nervous system are evidences of provincial mentality and are handicaps to the development of science.

My thesis is cogent to the cause of good teaching. A sound training in neuropsychiatry, whether the product considers himself neurologist, neurosurgeon, psychiatrist or psychoanalyst, must be broad and long, extending from the secure foundations of general and special biology to the lofty towers of psychodynamics and social science. By the very nature of its territory it must reach out into all of medicine on one side and psychology on the other. It should occur to those who preach for enloculation of the specialty that the stuff it deals with — the human mind — is impossible to circumscribe. Sound training, furthermore, cannot be limited to the small group who deal exclusively with the nervous system; it must be extended to all the tangential fields. Graduate teaching entails the larger responsibility of indoctrinating all those who delve into neural lore with sound principles and tenable theories of neurology. In so doing we lose nothing for our specialty and gain everything for science.

The era of perturbation regarding the training of a neurologist of which I spoke saw the initiation of a licensing board of neurology and psychiatry. This was opposed by the isolated voices of a few whose weak protests gradually have been stifled by the practical will of the majority. A licensing board or examining body set up for the purpose of accrediting doctors or specialists passes on the results of their general and special education and advanced technical training. Danger lies in the fact that the board's preconceptions of standards may so influence educators concerned in advanced training that a regimented rigid system of graduate training becomes fixed by implication. The late H. Douglas Singer once told me with great pleasure that many medical schools had approached members of the Board of Neurology and Psychiatry for advice and detailed specifications regarding courses for potential neuropsychiatrists. The inevitable result is the achievement of a minimal standard, laudable to be sure, but also an unhealthy regimentation and a restriction of brilliant students because of the premium placed on special examination. Higher and specialized education predicates a stage beyond the spoon feeding of undergraduate teaching with specifi-

cations regarding type, content or time involved in courses of training. A reasonably intelligent examining board should be able to determine proficiency without imposing sterile stereotypy. A supine attitude of educators regarding the boards will facilitate the control of graduate education passing into the hands of those who set minimal standards rather than those who are on the advance lines of progress. Without denying the advantages of some system of maintaining minimum standards I am skeptical of the ultimate value of the licensing board for progress in the field; instead I suspect a restraining influence. I strongly urge a system of advanced training which although satisfying board requirements, rises above them.

In the first three decades of this century graduate education in neuropsychiatry flourished in European countries. Many mature goal-directed graduates of medicine made pilgrimages to the medical centers of Vienna, Berlin, Paris, London and Amsterdam to study under famous masters. In small groups or as individuals they organized didactic courses or demonstrations in which a Professor taught the essentials of a phase of his subject in which he had attained proficiency, established new methods or evolved new ideas. Then on to another phase of the work under another master, perhaps in another city or country. The student could work in laboratories studying anatomy or pathology, perhaps beginning research in the field, or he could write histories as a hospitant or clinical clerk. The mature student was able to get an introduction to his specialty from authorities of its separate aspects along with his reading and studying. Personal experience could come later at home and with time. These students were not regimented by rules of so many hours, so many months or by group work in large classes geared to the pace of the slowest. These men were not hampered by mediocre instructors or neglected by divided attention of teachers harrassed by other responsibilities. The students were mature enough to choose and judge their own teachers. The majority of neuropsychiatrists of note and standing whose training occurred before 1930 are the products of this past glory of European post-graduate education.

In the last ten to twenty years neurology, neurosurgery, psychiatry and psychoanalysis have risen to heights in the United States that made educational pilgrimages elsewhere unnecessary. In fact the flow of students reversed itself: Europeans and South Americans came to our shores for special study in neuropathology, neurophysiology, neurosurgery, etc. How was it with our graduate education? Did it develop apace with American scientific progress and the calls made upon our teaching resources? It simply did not develop to meet the needs of our own students much less those who are attracted from other countries. Isolated laboratories, hospitals and universities attracted a few students for special work but an adequate survey of the entire field can be obtained with much difficulty and only at the cost of much time. Only the University of Pennsylvania Graduate School can be indicated as a successful venture largely because of its recognition of the necessary extensity of sound education even within a specialty.

In 1934 Bailey wrote of our combined venture at the University of Chicago. There he and I had fused our laboratories and clinical services and established graduate training fellowships each lasting three years. The first year was mainly for laboratory studies in anatomy, physiology and pathology, the second year essentially for medical neurology and the third year for experience in surgical neurology. There was no rigid separation of activities and for the entire three years the teaching facilities of the entire division and the whole university were available to the student. There were aspects of this special training that were not adequately taught and some students simply endured medical neurology for the privileges of the operating room. Yet we remain justifiably proud of our products.

We were not the only nor the first group to establish such general training fellowships for several hospitals and universities established similar graduate training before us and since. The degree of Doctor of Philosophy is sometimes held out as an incentive for thorough training. The fellowship and/or residency system has the great advantage of extensive clinical experience because the student is usually employed for ward, clinic or operating room assistance in

exchange for his tutelage. Its disadvantages are due to the fact that laboratory and clinic are often temporarily separated, the residence in one hospital or clinic results in an incomplete training, often narrow and sometimes biased and the student becomes indoctrinated too early against other points of view. Even though the fellowship is in a university environment the student does not have contact with as many aspects of his field as he should, for in no single institution are all phases of that specialty represented, much less well represented. His point of view will be permanently biased by the particular attitudes, prejudices or so-called school of his teachers. Often a graduate of such a course not only thinks but talks and dresses like his chief by virtue of the well known psychological mechanism of identification. The long residencies indoctrinate the student with provincialism and stifles the broad point of view.

Another defect is the teaching of various aspects of neuropsychiatry each isolated in departments separated by physical walls and by time. To best illustrate this problem I shall digress to certain experiences in undergraduate teaching. At the University of Chicago I taught neurology to third and fourth year medical students. They had been given courses in comparative neuro-anatomy and neuro-embryology in their last year of premedical work, neuro-anatomy had been taught in the first year of medical school and neurophysiology in the second year. Their teachers you would agree, were quite capable; yet when the students came to me they remembered little of their previous contact with neurological fundamentals. It was necessary to repeat the anatomy and physiology related to each portion of the nervous system when disease of that part was discussed. The fault obviously lay in the temporal dissociation in the teaching of anatomy, physiology and elementary clinical neurology resulting in a complete absence of integration or sense of wholeness of the subject. At our neurological society within the University I discussed this difficulty and suggested that in teaching neurology departmental lines should be broken down, that function should be taught as structure was learned, and disease with both by means of simple demonstration of physiological preparations and carefully selected clinical material. The answer was a rejection on the grounds of departmental barriers. My interest in the subject of integrated teaching stimulated me to write a "Neurology" for the purpose of facilitating such a method of teaching. I did not succeed in my purpose to the degree I desired; yet it has been gratifying to know that in continually increasing numbers of schools teaching from this book is begun in the first year along with the study of neuro-anatomy. Fulton's "Neurophysiology," Brock's "Basis of Clinical Neurology" and now Krieg's new "Functional Neuro-anatomy" have since become valuable additional aids for the teacher of integrated neurology.

Where in this country can we establish a center for the integrated graduate teaching of neuropsychiatry based upon broad and rational concepts free from bias, provincialism and regimentation and inclusive of all the necessary basic, auxiliary and correlative subjects for a thorough knowledge of the specialty? I think we have every reason to believe that such a center can be established in Chicago. You and I are prejudiced it is true, but I fail to see that any other large medical center has the capacities for the task of graduate education that we have here. In brief we have the human power in the shape of men of excellence in research, teaching and clinical skill who represent every aspect of the field from neuro-embryology to psychoanalysis, in other words a range and variety of view points that is catholic when considered in its entirety. We have the institutions that include every laboratory facility and quantities of clinical material in each aspect of neuropsychiatry, second to no other city.

Perhaps you may be skeptical that a city-wide graduate school can be established because of the difficulty of getting men to work together, for such an ideal which must of necessity rise above the personal. You may point to your disappointment that a medical faculty failed recently to accept an opportunity to further graduate education within its own walls and failed to grasp the possibilities, suggested by Fishbein, of leading a larger venture within the city.

In our field we have leadership and we have capacity to work together proven many times by the splendid functions performed by committees with whose work you are all familiar.

The Psychiatric Research Council of the State of Illinois proved that men could submerge their individual desires for a common ideal and work toward a common goal. You have the University of Illinois Neuropsychiatric Institute as a result. The divergent attitudes and contrary points of view that exist in the leaders of neuropsychiatry in Chicago are healthy and an absolute necessity for a broad graduate training. They do not cause personal or political enmity too great to be bridged over by the common interests of pedagogues and I have complete confidence that no differences existing among Chicago Neuropsychiatrist are important enough to consider as obstacles to a cooperative venture in graduate education.

When shall we organize graduate teaching and does not the war obstruct all innovation and even restrict already organized activities. I believe this is the time to begin our experiment just because there is a war. We should organize our curricula and be prepared for the large numbers of men who must delay their specialized training because of army service. After the war an accumulation of graduate students will swamp the already established training institutes. The time is propitious for another reason which is more immediate and practical. The armed services will need neuropsychiatrists in increasing numbers, far more than are now physically fit and available. The impact of this necessity will be felt only when neuropsychiatric casualties return to this country after offensive fighting has become more intense. The history of the last war discloses the fact that organization and mobilization of neuropsychiatric services is relatively late. There will be a hasty call for the rapid development of specialists so that refresher and introductory courses will be required. For our purposes, however, this necessary activity will be of value only as a springboard from which to leap into real graduate education in neuropsychiatry later.

Let me list the assets of the Chicago center of neuropsychiatry without mentioning names of individuals. There are four class A medical schools with hospitals attached. We have at least half a dozen independent hospitals, including the Cook County Hospital, with thriving departments of neuropsychiatry. There are in addition special hospitals and institutes such as the Institute for Juvenile Research, Illinois Eye and Ear Infirmary, Institute for Psychoanalysis, etc. We have museums of clinical neurology at Oak Forest and of clinical psychiatry at Chicago State Hospital and Elgin. Let me list the separate activities within our field and as I enumerate the ten divisions recall to your mind the investigators, teachers and clinicians who represent the available personnel in each.

I Morphology { Comparative neurology; Neuro-embryology; Neuro-anatomy }

II Physiology

III Pathology

IV Clinical Medical Neurology { Child; Adult }

V Clinical Surgical Neurology

VI Clinical Psychiatry { Child; Adult } in { Clinic; Hospital; State institution }

VII Psychoanalysis (Psychosomatic Medicine) { Child; Adult }

VIII Laboratory adjuncts { Serology; Roentgenology; Electroencephalography; Psychometrics; Rorschack }

IX Cooperative specialties { Urology; Otology; Ophthalomology; Endocrinology; Blood dyscrasias; Deficiency states } Internal Med.

X Environmental factors { Social agencies; Social services; Sociology }

Bringing them all together you will agree makes a composite faculty which is representative of many divergent points of view, in some aspects with brilliant leadership and in general an outstanding group. Such is the stuff out of which a Chicago plan can be developed.

I envisage that graduate teaching of neuropsychiatry in Chicago may be classified under three headings:

1. Training for specialization in Neurology, Psychiatry or Neuropsychiatry.
2. Training of specialists in other fields such as ophthalmology, otology, etc. where certain advanced work in neurology is necessary.

3. Teaching of general practitioners and internists in general principles of neurology and psychiatry.

The functions included under the second and third heading although extremely important may be quickly disposed of. They necessitate increasing our activity in participating and cooperating with teachers of other field and establishing certain general courses and seminars in our existing teaching institutions for the non-neuropsychiatrist. We have much to contribute and in the sphere of education our reward will be ample by a reciprocation of teaching interest on the part of the cooperating and auxiliary specialists whose services we will need.

No one man can sit at his desk and envisage a procedure and nobody can anticipate the difficulties which this plan will encounter. For the sake of this exposition let me sketch a quite tentative arrangement.

1. All the existing facilities of the city will be investigated and evaluated as to the physical capacities, the personnel, the time available and the likely cost to the student. It may be mentioned that each institution should be re-imbursed for cost of material, equipment and salary of teacher by fees paid by the students. Actually the fees will be reasonable because the graduate school will not have the overhead costs of its own physical equipment as in Philadelphia. It is hoped that a central or isolated institution to house the school will not be contemplated for the heart of the plan consists in scattering of the students into the individual institutions in which divergent points of view are represented. Such a school must continue to promise an electic rather than sectarian attitude.

2. A central committee of preceptors will interview each student coming to the Chicago Graduate school and on the basis of a personal knowledge of the individual, his goal and time available to him, plan his own individual curriculum. As time goes on and the plan is successful a full-time Dean of Students may be employed. The student will be sent to appropriate laboratories, classes, clinics and hospitals to enjoy a well considered and rounded education depending upon his special interests and abilities. Reports may be sent to the committee regarding his progress. Advanced degrees may be given under appropriate circumstances by the Chicago Schools. Formal general courses should be organized to supplement individual instruction, always bearing in mind the goal of integrated teaching. A list of all neuropsychiatric activities, classes, lectures and meetings should be kept active for the student group.

3. Graduate students who come to Chicago for special purposes such as work with a particular authority or study in a single department may be referred to the Committee on Graduate education for supplemental work. In this manner too early specialization may be prevented. Neurosurgeons may be expected to have a sound grounding in neurology so that they may be proficient in clinical diagnosis as well as air insufflation. Psychiatrists and psychoanalysts may be introduced to the machinery whose creaks and cracks produce the complexes and psychoses of which they deal. Neurologists may learn about the higher application of Jacksonian principles to psychodynamics. All students will get an authentic account of their entire specialty. No longer will they be biased by a neurologist who pleads for organicists to gird their defenses against the onslaught of the functionalists; no longer will psychoanalysts disregard the brain and non-psychological therapy. No one can do all things proficiently but everyone can know objectively and scientifically the valid technics and ramifications of his field.

4. There are a number of externships, internships, residencies and laboratory assistantships in the Chicago area. It is often by chance that these coveted positions are filled by individuals deserving of the opportunities afforded. Under the Chicago plan they may be filled by the most capable and outstanding individuals whose preliminary work will be under the constant scrutiny of a preceptor. Through such a system we may facilitate the use of several training centers languishing for students. Oak Forest can be made the Salpetriere of America — the state hospitals, the county Psychopathic hospital and numerous clinics are all available for graduate students.

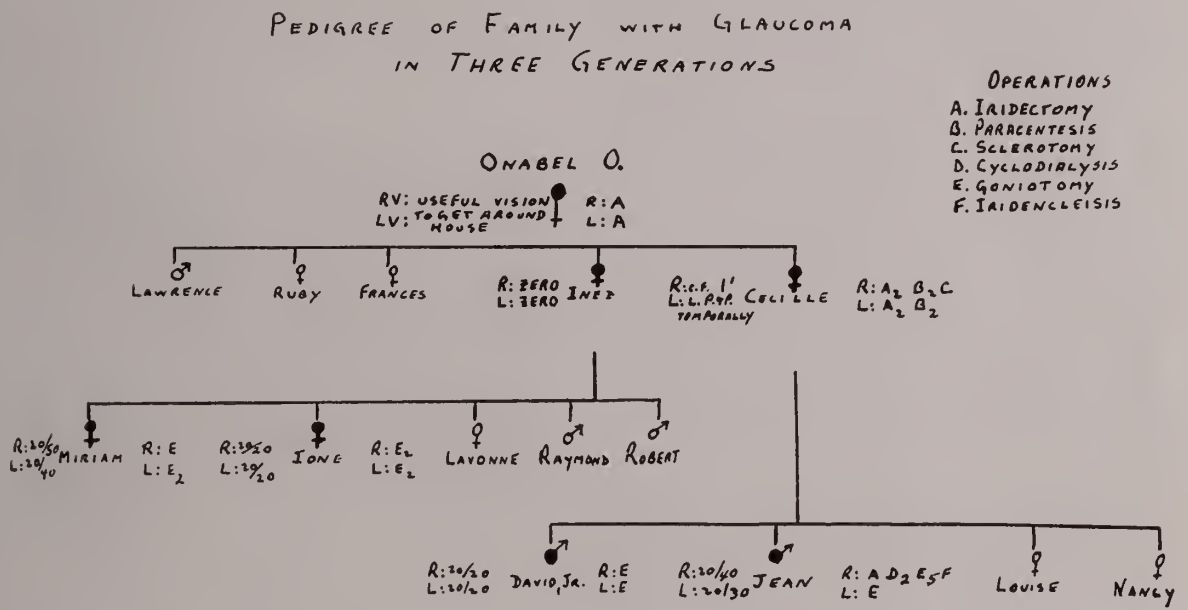
5. From such a student group we can recommend really well trained specialists to the licensing board. They may form a reservoir from which to fill positions in our local hospital, university and state institution. Graduates of such a training will not moan that what they have been taught is theirs by inheritance, is claimed by others. They will realize there is all too much for each to learn and do in a single life-time. Here in Chicago we may raise the general standard of neuropsychiatry and even that of the board itself.

As I stated before it is impossible to work out a practical plan for Graduate teaching of neuropsychiatry in Chicago without the help of many minds. My purpose tonight has been to convince you of the desirability and feasibility of a *city-wide interinstitutional plan*. The details are tremendous, the task gigantic but the goal is worth the effort.

THE TREATMENT OF HEREDITARY GLAUCOMA

WALTER G. ACKERMAN, M. D.
AND
THOMAS D. ALLEN, M. D.
CHICAGO

It is our purpose to deal with the treatment of hereditary glaucoma; many of the important characteristics and findings of this interesting condition will be dealt with in a report to be presented before the Section of Ophthalmology of The American Medical Association this year. The prognosis and results of treatment have never been satisfactory, as a close study of the literature indicates.



From this genealogical tree, it can be seen that the pedigree contains seven members of a family of three generations affected with hereditary glaucoma. Of the 14 descendants of the originally affected member, six had glaucoma, making a ratio of six affected to eight non-affected. The average age of onset of all seven affected members was 11.6 years with a span from 7 to 15 years. There was found no tendency to anticipation. There were four female to two male affected members from the original female affected ancestor. A slight decrease in corneal diameter was found in one member and reported present in another. No tendency for hydrophthalmia was noted in any of the affected members and the reports in the literature would indicate that hydrophthalmia is not commonly seen in patients with hereditary glaucoma, although there are several reports of the presence of these two conditions in the same pedigree. There was no evidence of alteration of depth of the anterior chambers or of the presence of an enlarged lens. Myopia was found in two of four members in which a refraction could be determined, with 5 or more diopters of myopia in one patient and a variable degree of 1 to 5 diopters in the difficultly controlled eye of the other.

The glaucoma in the members of this pedigree was of a chronic simple type. Instances of an acute type of hereditary glaucoma have also been reported and it seems that the type of glaucoma usually is the same in the same family, although there are reports of families in which both the

Presented before the Section on Eye, Ear, Nose and Throat, 101st Annual Meeting, Illinois State Medical Society, Chicago, May 20, 1941.

acute and chronic type of glaucoma have been present. The predisposition for eyes with dark irides to be affected with hereditary glaucoma is noted in the literature and this condition was found in four of the seven members of the present pedigree. The fifth had blue irides and the other two members were not seen by the authors.

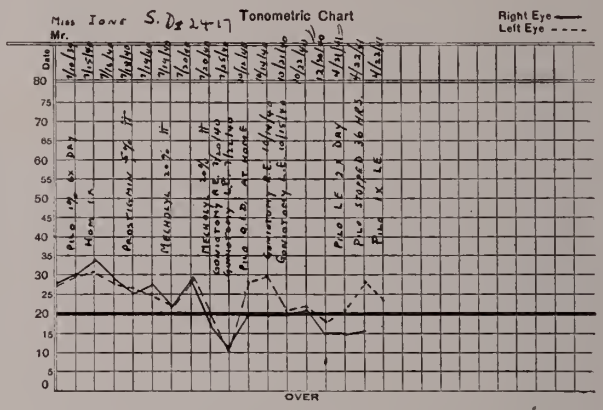
Members of the family of this report were of French-English stock. No particular racial group is reported as having a tendency to hereditary glaucoma.

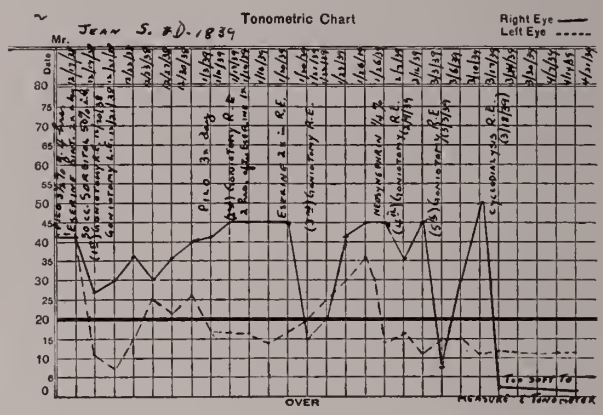
The gonioscopic findings in this disorder have not been previously recorded in the literature. In each of two patients (Jean S. and Miriam S.) on which gonioscopy was done before any surgery was performed there were found many fine iris processes with finger or web-like projections extending anteriorly towards the limbal portion of the cornea. No other relation to the height of the intraocular tension could be associated with any findings in the chamber angle.

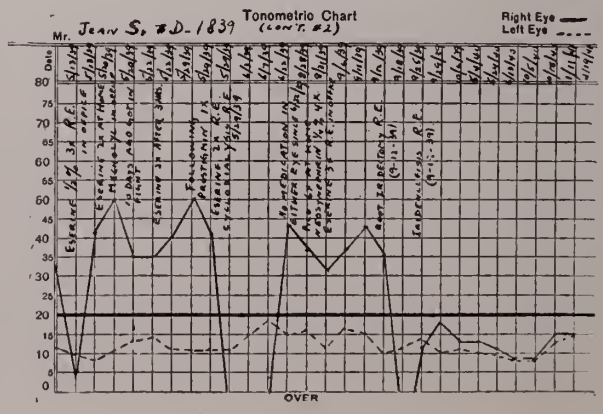
Prognosis and Treatment — The concensus of opinion in the literature regarding hereditary glaucoma is that it cannot be controlled without operation and that effective control is difficult even with operation. It has been stated that the disease cannot be controlled for any length of time by the use of miotics or hypotensive drugs. Most of the authors including Stokes[1] in his recent article in the Archives of Ophthalmology have stated that the best results were obtained by one of the fistulizing operations.

Early operation before irreparable damage has occured has also been stressed. From a study of members of our family, we find that the intraocular tension responded poorly if at all to miotics alone. As to the relative effectiveness of the various surgical procedures, iridectomy and posterior sclerotomy were found to be ineffective in controlling the situation. In one patient, one goniotomy has been effective (29 months) in one eye (L.E.), while in the other eye, five goniotomies, two cyclodialyses and a deep root iridectomy were without result; an iridencleisis has now controlled the condition up to the present time (19 months).

Two goniotomies performed a year apart on each eye of a second affected member (Ione S.) have apparently sufficed for nine months. In a third member (Miriam S.) one goniotomy of the right eye 18 months ago and two of the left 18 and 6 months ago have controlled the condition to date. In a fourth member (David S.) a single goniotomy of the left 8 months ago has controlled the tension, fields and vision.







Report of Cases

A. First Generation

1. Mrs. O.O. had bilateral iridectomy at the age of 11. (60 years ago.) She has markedly impaired vision but sufficient to get around the house.

B. Second Generation

2. Mrs. I.S., daughter of Mrs. O.O., has had no operations and is blind according to her sister, Mrs. D.S.
3. Mrs. D.S., No. D—3827, daughter of Mrs. O. O., had symptoms, at age of 14, of colored rings around lights and headaches. She used drops (eserine) for about a year. Then she had bilateral iridectomy. One year later she had a bilateral paracentesis and a repetition of paracentesis of both eyes and a sclerotomy of one eye six months later. When seen by us at the age of 46, the tension of each eye was 17 mm. The right vision was counting of fingers at one foot with no light projection nasally; left vision was L.P. & P. temporally only. Fields were unsatisfactory but markedly constricted.

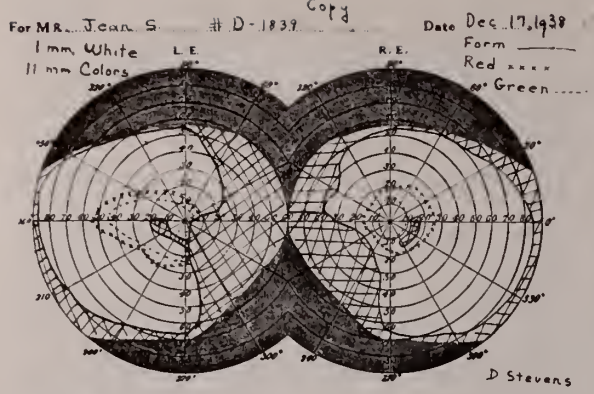
C. Third Generation

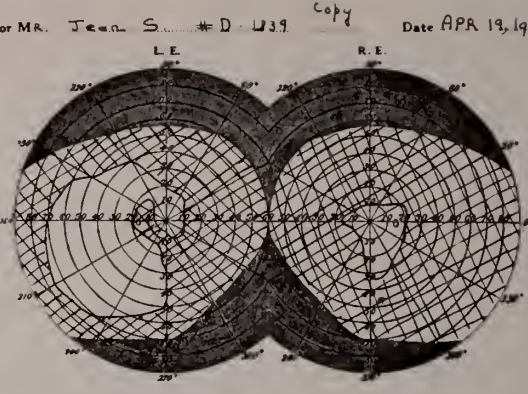
4. J.S., No D—1839, son of Mrs. D.S., No. 3827: A single goniotomy in the L.E. over 2 years ago, has controlled the situation to date. In the other eye, five goniotomies had little effect. Cyclodialyses on two occasions controlled the glaucoma for two to three months and a deep root iridectomy was then without effect. Subsequent iridencleisis has controlled the glaucoma up to the present time which is over a period of 1½ years.
5. Two goniotomies performed on each eye (July and Oct. 1940) of a second affected member, Miss Ione S., No. D—2417, daughter of Mrs. I.S., were sufficient to control the tension to date (December 30, 1940—five months).
6. Miss M.S., (now Mrs. M.P.), No. D—2504, daughter of Mrs. I.S.,: A goniotomy of the right eye was sufficient to control the situation for 18 months while a goniotomy of the left eye had to be repeated after 1 year; this has controlled the tension for six months to date, December 30, 1940.
7. D.S., No. D—2644, son of Mrs. D.S., No. D—3827: A goniotomy of the right eye has controlled the tension for twenty months and a goniotomy of the left eye has controlled the tension for 8 months.

Technique of Goniotomy and After Care — A thorough study of the chamber angle must be made before any attempt at goniotomy. Schlemm's area must be located. If it is not seen it is quite evident that goniotomy will do no good. If it is recognized one must study the pectinate ligament and the peripheral iris processes especially to discover the presence of vessels which must be avoided. The technique of goniotomy has been as follows: The usual surgical precautions are used such as culture of conjunctival scrapings and irrigation of the nasolacrimal duct. Local anesthesia is produced by instillations of 4% cocaine into the conjunctival sac and 1% cocaine with adrenalin is injected subconjunctivally near the area to be incised; the eye is fixed with forceps and the goniotomy knife is introduced into the anterior chamber through the limbus at a point approximately 135° opposite the sector of chamber angle to be incised. The blade of the knife is introduced parallel and just anterior to the plane of the iris. With the point of the knife almost touching the pectinate ligament the flat blade is made to indent the iris in order to again verify the position. Bearing in mind the relative positions as seen with the gonioscope one can now raise the blade so that the point is in the trabecular area. A sector of one fifth to one sixth the circumference of the limbus is *very lightly* incised. The usual site for this surgical procedure has been the lower temporal quadrant but one must avoid any blood vessels. No contact lens is used and magnification is provided by a Beebe or Zeiss loupe. The knife we use has a Barkan cutting point and edge and a *cylindrical* not a conical shaft. The cylindrical shaft allows for easier manipulation. The shaft is about 12 mm. long. No mydriatic is usually used in the postoperative care but rather a *miotic,* as we wish to pull the iris away from the operative area so synechiae will not form.

The advantages of goniotomy are that it is simple to perform, easily repeated if necesary and that it does not visibly deform or change the appearance of the eye. Its main danger as we see it is the possibility of profuse hemorrhage into the chamber by cutting too deeply or by cutting a superficial vessel. This may be avaided by close preoperative study with the gonioscope. A bare nicking of the trabeculae is all that is necessary. The other dangers are similar to those of any intraocular operation.

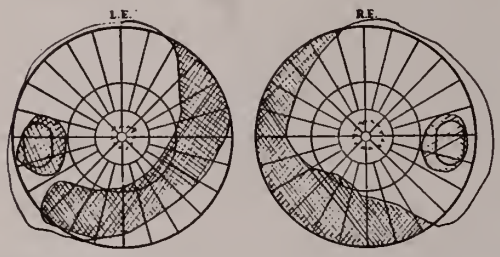
A comparison of the fields taken at intervals for two of the patients in this family reveals an increased contraction in both eyes of one patient (Jean S.) and a slight change in one eye of the other (Ione S.) during the period of observation, almost two years.





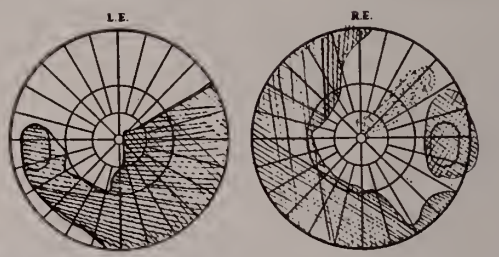
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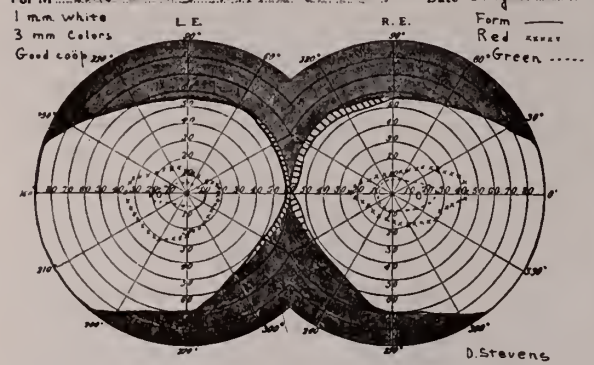


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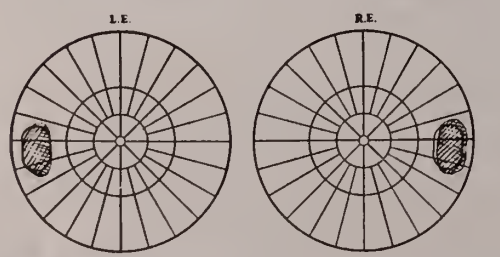
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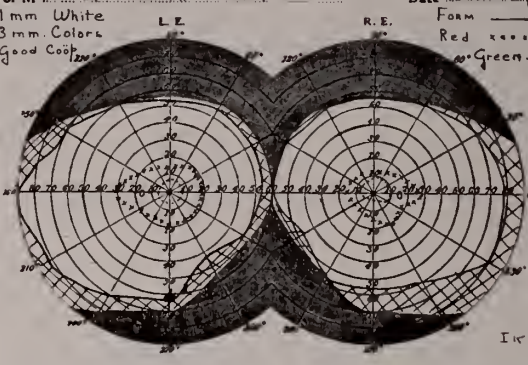


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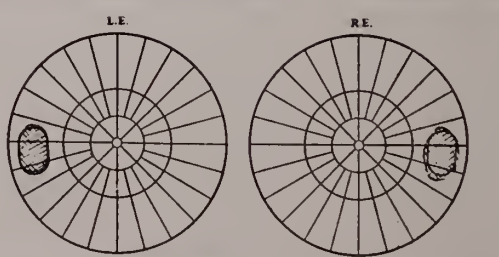
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SUMMARY AND CONCLUSIONS

From an analysis of the findings in a pedigree with hereditary glaucoma in which 7 out of a total of 15 members had glaucoma:

1. We have experienced the same difficulty in controlling this condition both with miotics and surgery as reported by other writers on this subject.

2. Surgical procedures such as paracentesis, iridectomy, posterior sclerotomy and cyclodialysis were found to be relatively ineffective. A single goniotomy was effective in controlling the tension in four eyes. Two goniotomies were required to control the tension in three eyes and in an eighth eye an iridencleisis was finally required to control the tension after five goniotomies, two cyclodialyses and a deep root iridectomy failed.

3. From the observations made on members of this family with hereditary glaucoma it is felt that although miotics alone are relatively ineffective in controlling the tension before surgery, they may be of value in helping maintain the lowered tension *before* surgery; they are often of value in helping maintain the lowered tension *following* surgery.

4. Early control of the glaucoma before much loss of vision has occurred must be stressed and for this reason the finding of glaucoma at an early age is an indication to search for a tendency to glaucoma in every other member of the family.

REFERENCE

1. Stokes, Wm. H., Hereditary Primary Galucoma: A Pedigree With Five Generations. Archives of Ophthalmology, Nov. 1940.

DISCUSSION

Dr. Samuel J. Meyer, Chicago: Hereditary or familial glaucoma has been known for 100 years, but it is quite rare. Benedict first described this clinical entity in 1842. In 1932 Bell collected 295 cases. It is a dominant and continuous characteristic in heredity, and it may be transmitted by both sexes. The parent who is the transmitter is usually affected.

Von Graefe in 1869 first noted the presence of anticipation. Siblings tend to become liable at approximately the same age, the age being determined by the age of the onset in the parent. An average anticipation for the mean age of onset in the offspring is some ten years earlier than in the parent. For this reason, the age of onset in hereditary cases is, on the average, some twenty years earlier than in a general series of cases of glaucoma. Thus, Bell found in 1932 that 52 per cent of 196 hereditary cases occurred before the age of 30 years, while only 3.6 per cent of 3,021 general cases came under this category. As a general rule, the hereditary cases have appeared in otherwise healthy stock with no demonstrable association with any other disease or congenital defect.

The mechanism by which the hereditary influence acts is unknown. It is possible that the heritage of a small eye and a large lens may have some influence in the matter, or that congenital malformations at the filtration angle (as occurred in Dr. Ackerman's cases) may be handed down; but the complete lack of association between hereditary primary glaucoma and buphthalmos seems to deny this explanation. The fact remains that the literature contains no evidence of the source of glaucoma in hereditary cases, but there is no doubt that the affected members of a family so tainted should abstain from parentage. Indeed, there is a grave risk to the offspring of any sibling, affected or not, belonging to a stock known to carry the disease in hereditary form.

The surgery in such cases, as in all cases of juvenile glaucoma (15 per cent of such cases are of hereditary character (Lohlein) is rather unsatisfactory. If it is definitely proven by more gonioscopic examinations that congenital malformations at the filtration angle are present, then goniotomy may be of value. But I am certain that those of us who have practiced goniotomy know the difficulties encountered in such surgery and the uncertainty of the end results.

The author is to be commended for the presentation of this relatively rare condition and the use of gonioscopy to enhance further our knowledge in the surgical approach of treatment in such refractory cases.

Dr. Louis Ostrom, Rock Island: May I ask if they have any means of measuring the size of the lens in these conditions to determine anything of value in this work?

Dr. Sanford Gifford, Chicago: I might mention a very similar family I have had in which iridencleisis was quite successful in two members. The oldest sister was seen when she was quite blind by my father in Omaha; she was about 40 years old and absolutely blind. Two younger sisters were worked up by Dr. Post in Joplin. I saw them when they were about 19 years of age. The tension remained about 35 to 40 and they still had good central vision. In both cases bilateral iridencleisis was successful in keeping the tension down. In one case the bleb became very thin and had to be cauterized two years later. It did not cause a rise in tension. She wrote me several years ago and wanted to know if she should get married. I knew she would anyway, so told her to go ahead and I hope to see the children some day.

About buphthalmos, I would like to say that we should put in a plea for early treatment when it comes along; and to say that either trephine or iridencleisis has been successful in a number of cases. I have had

good results in a number of cases, in only two of which did it fail to control the tension. I think we should not wait until the vision is lost. In one case the obstetrician recognized the condition immediately after birth and I operated at the age of 7 days. It was a unilateral case with a steamy cornea and rupture of Descemt's membrane. It never became enlarged. The child is now 3, has myopia of about diopters, has useful vision and the tension is under control.

Dr. Hallard Beard: I should like to ask by what mechanism the goniotomy accomplishes lowering of intraocular pressure.

Dr. Frederick A. Davis, Madison, Wisc.: I have enjoyed this. It is an important subject. None of us see too many of these cases but we do encounter them occasionally. I should like to cite one case of hereditary glaucoma, that of a girl of 18. The mother has had chronic simple glaucoma for many years. I used a modified LaGrange, with a fairly good sized sclerectomy, with incarceration of one iris pillar. The tension was reduced from 50 to 15 and has remained so. The appearance of the anterior chamber is interesting; it was very shallow, unevenly shallow, with a distorted, swollen lens.

I have operated a number of cases of congenital buphthalmos after the manner described by Dr. Gifford. Trephining is usually quite successful in these cases if done early, before the disease is advanced.

Dr. W. G. Ackerman, Chicago (closing) I want to thank Dr. Meyer for his discussion.

We found no evidence of abnormality of the lens. The literature, so far as we were able to find, mentions none in hereditary glaucoma.

Dr. Beard asked about the mechanism of goniotomy. We believe that it is necessary to incise the trabecular fibers so that aqueous will get to the canal of Schlemm.

I enjoyed Dr. Gifford's comments. In our cases iridencleisis certainly worked very well. We tried goniotomy and got excellent results in several and in three eyes we had to repeat it once. The advantage is that following goniotomy the patient has a normal looking eye. There is no evidence of any operation having been done. The post-operative course is short. If it works it is well worth while. It can be repeated as often as necessary. If the incision is too deep, however, a hemorrhage into the anterior chamber may occur.

NOTHING A CHECK WON'T CURE

"When will your dad be able to work again?" *Dr. C. S. Venable* of San Antonio asked the small son of the workman who had met with an accident.

"Can't say for certain," replied the boy, "but it won't be for some time 'cause compensation's set in."

SUBDURAL HEMATOMA

Paul C. Bucy, M.D.
CHICAGO
Department of Neourology and Neurological Surgery, University of Illinois, College of Medicine

The problem of the subdural hematoma is, from both the clinical and pathological viewpoints, far more complicated than the ordinary presentation would lead one to believe. Although many of the facts connected with this subject are sufficiently clear, others dealing with all phases of the problem, etiologic, pathogenic and diagnostic, are still very obscure.

From a clinical standpoint, these hematomas may be divided into acute, subacute and chronic. They may affect persons of any age or sex but they are far more prevalent in males and occur most frequently in infants and in persons past middle age.

Acute Subdural Hemorrhage. The acute extravasation of blood into the subdural space is a common occurrence in association with severe cranio-cerebral injuries. Ordinarily the amount of blood found under such circumstances is small and associated with other far more severe injuries to the brain such as haemorrhage into the brain stem, extensive cerebral laceration and contusion which are primarily responsible for the patient's critical condition and frequently his death.

On occasion, however, the profuse outpouring of blood into the subdural space appears to be the primary factor in the case. The following is such a one:

CASE 1

J. K., a male laborer 47 years of age, was referred by Dr. W. H. Lipman of Chicago. This man accidentally fell from a scaffold on the morning of July 12, 1932. He was admitted to the University of Chicago Clinics at 10:30 a.m. that morning. On admission he was comatose. The blood pressure was 150/70, pulse-rate 60, and respiratory rate 15 per minute. He was somewhat cyanotic. Babinski's sign was present bilaterally. The left pupil was dilated to over 6 mm. in diameter, the right was about 2 mm. Neither reacted to light.

A diagnosis of an intracranial hemorrhage on the left side was made, and he was taken to the operating room as soon as preparations could be made. At 11:50 a.m., under local anaesthesia, a linear incision and trephine opening were made in the left temporal region. There was no extra-dural blood. On

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incising the dura mater, a large quantity of dark liquid blood escaped from the subdural space. It was evacuated as thoroughly as possible and the space drained. Just prior to opening the dura mater, the systolic blood pressure had risen to 170 mm. of Hg. and the respiratory rate had fallen to 6 per minute. The pulse rate was still 60. After evacuating the blood, the blood pressure fell to 120/60, the pulse rate rose to 130 and the respiratory rate to 30.

Following the operation, blood continued to drain profusely, the patient remained comatose, developed a hyperthermia and soon died. Unfortunately, the coroner refused to permit a post-mortem examination.

In spite of the lack of the complete information which a necropsy would have given us, it seems reasonable to assume that one or more of the large veins crossing the subdural space from the cerebrum to the superior longitudinal sinus were severely torn allowing the profuse extravasation of blood into this space. That the condition was entirely traumatic, also, seems reasonable. There may, of course, have been other injuries of the brain here which would have precluded this man's recovering. However, it is barely possible that in similar cases a direct exposure of the region just lateral to the superior longitudinal sinus might permit one to occlude the bleeding vessels and allow some of these patients to recover. Perhaps this is too optimistic for one is dealing with critically ill patients, and the exposure might have to be very extensive to be effective.

Subacute Subdural Hematoma. Much more commonly, the extravasation of blood into the subdural space occurs more slowly than in the case just recited, as in the following instance:

CASE 2

H. C. R., a dentist 40 years of age, was referred by Dr. Albert Zrunek of Chicago. This man was known to have been a victim of severe chronic alcoholism for many years. Immediately prior to his present illness, he was however otherwise well.

On the evening of March 3, 1941, he went to his home alone. Exactly what happened there is not known, but it appears that he probably fell down the cellar stairs, striking his head on the concrete floor. He sustained a laceration of the scalp in the right temporal region. He lay there long enough for a considerable pool of blood to accumulate on the floor. He then got up and and went to his bed, but by that time the wound had practically ceased bleeding as the bed clothing was but little stained. About noon on March 4, he came to his laboratory and worked there that afternoon. He suffered from a mild headache and was slightly drowsy but as this was not uncommon with him, little attention was paid to these symptoms. The following morning he seemed all right. That afternoon his speech was somewhat thick and hesitant. He had difficulty in writing down telephone numbers, and he complained of headache. That night he was restless and moaned frequently. On the morning of March 6, he was unable to talk. He had difficulty in using his right hand but was able to walk normally. He drank a glass of water and shortly vomited. There was a slight right lower facial weakness. The tendon reflexes were slightly more active on the right side. The right abdominal reflexes were diminished. Babinski's sign was present on the right side. The pupils and optic discs were normal. Sensation, as far as could be tested was intact. Blood pressure was 180/90, pulse 96, respirations 24, and temperature 102° (F.).

He was immediately transferred to the Chicago Memorial Hospital. X-ray examination revealed a linear fracture in the lower part of the right parietal bone extending into the lateral part of the right spenoid bone. The laboratory examinations, including the Wassermann and Kahn tests, on the blood were all negative.

In spite of the obvious injuries to scalp and skull on the right side, a diagnosis of an intracranial hemorrhage on the left side was made. An incision and trepanation were made in the left temporal region. There was a large subdural coagulated hematoma of recent origin covering the entire left temporal lobe. After this was removed, it was seen that the cortex of the left temporal lobe was considerably contused and lacerated, and there were numerous torn vessels, mostly small veins, from which this hematoma had doubtless originated.

This man's condition rapidly improved following the operation, and he left the hospital practically completely recovered 17 days later, on March 23.

Here again the situation seems clear. The bleeding was less profuse than in Case 1 because the torn vessels were of much smaller calibre. The injury to the left temporal lobe, when it was apparently the right side of the head which struck the concrete floor, is of the familiar *contra coup* type. There appears to be no reason to attribute the injury to anything except trauma. His alcoholism apparently accounts only for the fall down the stairs. There is no reason, in this case, to assign to it any more direct role in the production of the hemorrhage.

As will be pointed out later the role of injury in the production of subdural hematomas is not always as clear as in this case. Thrombosis of the superior longitudinal sinus and of the cerebral veins draining into it is one of the causes of the subdural effusion of blood. In most such cases the interference with cerebral cir-

culation, the edema of and herorrhage into the cerebral substance completely over shadow the subdural hemorrhage in clinical importance. Recently, however, Lesemann and I have reported a case in which thrombosis of the cerebral cortical veins, in a case of recurrent thrombophlebitis, resulted in a subdural hematoma of such magnitude as to produce increased intracranial pressure and evidence of the compression of one of the cerebral hemisphere.

Subdural Hydroma. There is another condition which follows rather closely on the heels of a cranio-cerebral injury and which presents a clinical picture indistinguishable from that seen with a subacute subdural hematoma. It is known as subdural hydroma. The following is a typical example:

CASE 3

I. E., a man 44 years of age, was referred by Dr. Charles Berkowitz of Chicago.

On September 10, 1933, he was in an automobile accident as a result of which he was unconscious for a time and subsequently vomited. He was taken to a hospital but returned to his home the following day. Although he suffered from a continuous headache, he was up and about all day. Three days after the accident, on September 13, he became dull and lethargic, and on the following day (9-14-33), he was admitted to the University of Chicago Clinics in a semi-stuporous condition. He could be aroused and would answer questions quite intelligently and would then lapse back into a stuporous state. His blood pressure was 170/90, the pulse rate 40 and the respiratory rate 8 to 12 per minute. The tendon reflexes were more active in the left extremities. The abdominal reflexes were absent on the left side and Babinski's sign was positive on the left. X-ray examination of the skull revealed two linear fractures in the right parieto-occipital region. A lumbar puncture was performed and revealed bloody spinal fluid under a pressure of 350 mm. of fluid.

A diagnosis of an intracranial hemorrhage, probably subdural, on the right side was made. He was operated upon, an incision and trephine opening being made in the right temporal region. On incising the dura mater, a large quantity of slightly bloody cerebrospinal fluid was found in the subdural space. Over 60 cc. were evacuated.

Following the operation, he rapidly recovered and was discharged from the hospital on September 22.

Clinically the picture produced by these subdural hydromas does not differ materially from that caused by a subacute subdural hematoma (Case 2). In both cases the symptoms are those of localized and generalized cerebral compression.

These subdural collections of cerebrospinal fluid arise as the result of a small tear in the arachnoid membrane which allows fluid to be forced from the subarachnoid into the subdural space. But as the fluid accumulates in the subdural space, it compresses the arachnoid membrane against the brain preventing its own escape.

These are not common lesions but have been recognized and described by many neurological surgeons.

Chronic Subdural Hematoma. Few intracranial lesions can present as many difficult and confusing problems, both from the etiologic and diagnostic standpoints as the chronic subdural hematomas. In the classical case this is, of course, not true. And one might readily gather from the textbooks and current literature that all cases follow a standard pattern. Unfortunately, such is frequently not the case. In all too many instances, the lesion is not recognized until disclosed at necropsy and in still a larger number of cases the cause for its existence is never determined.

For orientation a classical case will be first considered.

CASE 4

A. R. H., a lawyer 71 years of age, was referred by Dr. C. H. Drenckhahn of Urbana, Illinois. He was a vigorous, active well man until about February 10, 1941, when while bathing before dinner he slipped in the bath tub and fell, striking his right cheek. He was momentarily dazed but was not unconscious, and although the local injury was painful he dressed and attended a banquet that evening. The next day he had a headache and these continued, gradually increasing in severity. He developed dizziness and his gait became so uncertain that his sobriety was questioned. He consulted several physicians who could find no abnormality except that his teeth were not in good condition. Physical examination, electrocardiograms, x-rays of the skull, examinations of the urine, blood and spinal fluid all failed to reveal any abnormality. It was decided to remove his teeth over a period of several days. In the midst of this procedure, on April 3, 1941, he became lethargic. The following day he developed a partial aphasia and right hemiplegia. And early on the morning of April 5 he became comatose. I first saw him at 4:00 p.m. that day at the Carle Hospital in Urbana. The temperature was 99° (F.), the pulse 80 and respirations 20. The blood pressure was 95/60, whereas it had formerly been about 130/80. He was in deep coma. The optic discs were normal. The right pupil was dilated but neither reacted to light. All four ex-

tremities were completely flaccid. The tendon reflexes were present but equal on the two sides. Babinski's sign was present bilaterally. He did not respond to painful stimuli.

On the basis of the history alone a diagnosis of a left subdural hematoma was made, and he was operated upon at 5:30 p.m. on that afternoon, April 5. On opening the dura mater, a membrane about 2 mm. thick was exposed. This was readily separable from the dura mater of which it was not a part. When this membrane was ruptured, a large quantity of dark reddish brown fluid containing a few small clots was evacuated. The cavity was thoroughly irrigated and a soft rubber drain was inserted. The drain was removed the following day.

Under the expert attention of Dr. Drenckhahn and his associates, this man rapidly recovered and has long since engaged actively in his professional duties.

The entire picture here seems clear. About February 10 he fell, striking his face. This blow, causing a forward shift of the brain, produced small tears in one or more of the veins passing from the left cerebral hemisphere to the superior longitudinal sinus. It is a well established fact that although any cranial injury may lead to a subdural hematoma, blows on the front and back of the head cause greater strain on these veins and thus are more apt to lead to such a hemorrhage. That these veins do tear in this fashion is no surprise to anyone who has exposed them at operation. Typically these veins leave the cerebral substance well lateral to the sinus, cross through the pia mater, the subarachnoid space and arachnoid membrane and then run for considerable distances in the subdural space to reach the sinus or one of the dural venous lakes lying lateral to it. In the subdural space, these thin walled veins are supported only by a thin outer layer of arachnoid membrane. They are readily torn at their point of attachment to the rigid dura mater, as every neurological surgeon knows.

However, these tears are small and the amount of bleeding as evidenced by the lack of symptoms at the time, and often for some time thereafter, is small. This is not surprising since the pressure in these veins is low at all times and with the individual upright, is in fact lower than atmospheric tension. How then does this small quantity of blood give rise to a progressively increasing clinical disturbance which may, as in Case 4, require two months or even more before the true nature of the trouble is recognized? What happens in these cases has been clearly pointed out by Gardner. It is obvious from the nature of the fluid in these subdural cysts that we are not dealing with pure blood. The blood has disintegrated and obviously been diluted. This dilution may occur in one or both of two ways. In some cases, there is not only an extravasation of blood into the subdural space but a discharge of cerebrospinal fluid through a tear in the arachnoid membrane (as in Case 3) as well. However, this does not explain cases such as Case 4, where the symptoms develop so slowly over so long a period of time. Here another mechanism is operative.

The blood once released into the subdural space has no avenue of escape as there is no capillary bed by means of which it can be absorbed. This loculated blood, like blood entrapped elsewhere in the body, begins slowly to disintegrate. The red blood cells disintegrate, discharging their contents into the plasma and thereby raising its protein content and thus its osmotic tension. Furthermore, the larger protein molecules also break down into smaller ones and raise the osmotic tension even further. This hypertonic fluid is separated from the cerebrospinal fluid, with its very low protein content, only by the capsule of the cyst and the thin arachnoid membrane. Accordingly, this membrane acts as a dialyzing membrane, and fluid is drawn through it diluting this disintegrating blood. It is possible that some fluid is also drawn by osmosis from the blood stream, particularly that in the numerous very thin walled capillary channels which form in the membrane of the cyst. This disintegration of the blood and accretion of the fluid by osmosis is naturally a slow and gradual process and fits well with the slowly developing clinical picture.

How the cyst wall about this hemorrhagic cyst is formed is still a matter of dispute. It is not, as will be further discussed later, formed by the inner layer of the dura mater. It is formed *de novo*. The fibroblasts which proliferate to form this loose, vascular connective tissue may arise from the fibroblasts of the dura mater and the arachnoid membrane. This seems unlikely as the cyst wall is distinctly separate from these two membranous structures and usually readily separable from them. Years ago Maximow showed that the white cells of

the blood are capable of being transformed into fibroblasts. It seems most likely that in these cases this bloody fluid acts as a tissue culture in which these cells do so metamorphose and in turn give rise to this loose, vascular encapsulating connective tissue membrane.

Although in this case, and in many others the etiological factor of trauma seems obvious, even that aspect warrants further investigation. In this case, the cranial injury, though definite, cannot be regarded as severe. In many instances it is even less marked. In some in fact it is so trivial and so remote that it is seriously regarded as an etiologic factor only by the most credulous. Certainly if cranial injury be the sole etiologic factor, then subdural hematomas should bear a direct relationship to the severity and incidence of such injury. This may possibly be true of the acute and subacute hematomas illustrated by Cases 1 and 2. It is not true of the chronic subdural hematomas. More often than not, they follow slight injuries or apparently none at all. They show a definite tendency to develop in the infant and in those past middle age. That enormous group of vigorous healthy young adults from 20 to 35 years of age, who suffer so frequently from severe head injuries, are remarkably free from this disease if cranio-cerebral trauma be the sole factor. It seems obvious that abnormally fragile blood vessels, due to whatever cause, must play a very prominent role. And although I would not deny the likelihood that in many, even most cases, trauma is the precipitating factor surely it is not unreasonable to believe that in some cases abnormality of the vessel walls alone is sufficient to permit of such a leakage of blood. Such a possibility must be particularly entertained in those cases without history of trauma, and where the development, diagnosis and treatment are not so clear cut, as in the cases already presented.

Occasionally various hemorrhagic dyscrasias of the blood, particularly the purpuric states, may be responsible for the extravasation of blood into the subdural space. It is also well known to the neuropathologists that thrombosis of the superior longitudinal sinus and the connecting cerebral veins commonly results in bleeding into the subdural space as well as into the cerebral substance. Usually in such cases the subdural bleeding is responsible for but a small part of the symptomatology. However, in an unusual case recently reported by Lesemann and me the subdural hematoma was a major factor.

The following three cases illustrate the very great diagnostic difficulties in some cases, as well as the obscurity of their etiology:

CASE 5

F. I. P., a physician 72 years of age, was relatively well until May 1, 1936, except that in 1933 a prostatectomy had been performed and he had suffered from a chronic pyelo-cystitis ever since.

On May 1, 1936, he began to have an occasional frontal headache. These gradually grew more severe and more frequent and after May 15 he suffered from nausea on occasion. On June 19, he came to Chicago and on that day vomited for the first time. He entered the University of Chicago Clinics, insisting that he was suffering from a brain tumor. However, complete physical and neurological examinations were negative as were roentgenograms of the skull and chest. On June 29, he became very stuporous. The blood pressure was 100/60, the optic discs were flat. A lumbar puncture was performed. The initial pressure was 218 mm. of fluid. The fluid was clear and colorless, contained three cells, a slight trace of globulin by Pandy's test, 66 mgm. % of glucose and 72 mgm. % of protein. The Wassermann tests on both blood and spinal fluid were negative.

On June 30, he was seen by me for the first time. He was then comatose and there were no localizing neurological findings. Because of the slightly increased spinal fluid pressure and his precarious condition, it was decided to make a right subtemporal decompression. This was done at 1:30 p.m. that day. On opening the dura mater, a large subdural hemorrhagic cyst was found. The thin friable capsule was readily separable from the dura mater. After evacuation of this cyst, the patient's condition was considerably improved but did not continue so. Therefore, on July 3, 1936, the skull was trephined on the left side, disclosing a similar large subdural hemorrhagic cyst. However, in contrast with the one on the right, this one contained definitely purulent material, and when cultured was found to contain the same bacterial organisms as the infected urine. Presumably they had been borne there by the blood stream. Although he improved for a time, he later gradually failed and died on July 8, 1936.

Necropsy disclosed a meningitis, cystitis, early bronchopneumonia and marked atherosclerosis.

At all times both the patient and his family denied knowledge of any possible injury which might be related to his terminal illness. That some trivial injury may have caused a small tear in one of the veins passing from the cere-

brum to the sinus, of course, cannot be denied. But it must be admitted that any such injury so trivial as to have escaped all memory could hardly have been more than a precipitating factor and in order for it to have been effective the venous walls must, for some unknown reason, have been unusually fragile.

The complication of infection within the cyst on the left side is unique in my experience nor do I believe that such is a common finding elsewhere.

This case also illustrates the well-known facts that these subdural collections of bloody fluid are not uncommonly bilateral; that they are commonly associated with little or no evidence of increased intracranial pressure, even on lumbar puncture; that headache, often in the absence of intracranial hypertension, is one of the outstanding symptoms; and, that localizing neurological manifestations are often lacking.

CASE 6

A. L., a dentist 25 years of age, was referred by Dr. F. R. Swiateck of Chicago.

On June 1, 1936, he began to suffer from severe fronto-occipital headaches. He also complained of a stiff neck and of dizziness. These latter two symptoms soon subsided but the headaches grew progressively more severe. On June 15, he began to complain of failing vision, his right arm and hand grew weaker. He had lost thirty pounds in weight. On June 30, he was admitted to the University of Chicago Clinics. Examination disclosed a marked bilateral papillaedema with large linear hemorrhages about the discs. He had a spastic right hemiparesis. Roentgenograms of the skull were negative. The Wassermann and Kahn tests on the blood, urinalysis and blood counts were all normal.

A diagnosis of a left frontal brain tumor was made, and on July 2, 1936, a left fronto-temporal osteoplastic flap was reflected by Dr. Percival Bailey. On reflecting the dura mater, a large subdural hemorrhagic cyst was exposed. The capsule was 2 mm. thick and readily separable from the dura mater. The cyst was evacuated and the capsule removed. On July 9, a trephine opening was made on the right side, but there was no subdural hemorrhagic cyst on that side.

He promptly made a complete recovery and has since been engaged in an active dental practice.

Although this patient persistently denied knowledge of any craniocerebral trauma, one can not help but wonder if the initial temporary symptoms of stiffness of the neck and dizziness were not the result of subarachnoid bleeding due to some undisclosed accident. Nonetheless this case illustrates the difficulty of arriving at the proper diagnosis in the absence of a clearly related history of injury. Fortunately the treatment in this case was appropriate and successful in spite of this diagnostic error. Such was not the case in the following instance:

CASE 7

R. H., a railroadman 65 years of age, was referred by Dr. C. S. O'Neill of Chicago. At the time of his admission to the hospital, it was stated by his wife that he had been perfectly well prior to August 28, 1936 and had gone to church that day; that at 7:00 p.m. he became weak and sleepy and had gone to bed. A little later they were unable to arouse him, but subsequently he had awakened and then lapsed back into a coma. As will be seen, this story profoundly influenced the diagnosis.

After his death and the necropsy, the family stated that for three months he had suffered from headaches which became so severe as to cause him to stop work and limit his activities. These headaches continued and a week prior to his admission to the hospital, he began to complain of blurring of his vision. During this week he had been confined to bed, had vomited occasionally without preceding nausea, had been irrational and at times unconscious.

No history of any injury could be elicited.

He was admitted to the University of Chicago Clinics on August 29, 1936 at 12:15 a.m. He was stuporous but could be aroused slightly. He was restless. The blood pressure was 170/78. He had Cheyne-Stokes type of respirations. The pulse was very irregular but forceful, and the rate was approximately 62 per minute. The optic discs were normal. The pupils were small and equal and reacted slightly to light. There was a *right* facial weakness. The *left* arm was motionless although he moved the right arm and both legs. The tendon reflexes were more active on the right side. No abdominal reflexes could be elicited, and Babinski's sign was present bilaterally.

He grew steadily worse and died the following day — 8-30-36.

In view of the history of a sudden onset of stupor, only five hours before admission to the hospital, occurring in a man 66 years of age who had been "perfectly well" previously, a diagnosis of a cerebrovascular accident, either cerebral hemorrhage or thrombosis was made. It was later obvious that there had been gradually increasing evidence of intracranial disease for over three months. Had that history been available, a different diagnosis would certainly have been made.

At necropsy large bilateral subdural hemorrhagic cysts were found. They were filled with dark reddish brown fluid containing several small blood clots. The capsules of these cysts were readily separable from the dura mater, and the cysts had obviously not

arisen from any hemorrhage between layers of the dura mater. There was also marked cerebral arteriosclerosis and considerable generalized arteriosclerosis.

Microscopically, the capsule was composed of a loose connective tissue containing many rather large thin-walled blood spaces. There were numerous phagocytic cells and lymphocytes in this membrane but no polymorphonuclear leukocytes. The dura mater was intact and bore no direct relationship to the hematoma or its capsule.

Here again we are confronted with a subdural hemorrhagic cyst without any history of a cranio-cerebral injury; although it must be admitted, in this instance, that the family had demonstrated their unreliability as witnesses. Even so this and cases 5 and 6 clearly demonstrate some of the diagnostic difficulties encountered with this condition. Although cerebral compression is present in every case, and headaches are common and vomiting occasionally occurs, choking of the optic discs is frequently lacking. Even more confusing is the fact that the spinal fluid pressure is often not elevated (Case 4) and the spinal fluid itself is usually perfectly normal. Occasionally it may be slightly yellow and the protein content somewhat increased. Although *a priori,* it might be expected that encephalography would provide an excellent means of diagnosis, this procedure is usually disappointing and the encephalograms are often surprisingly "normal" in appearance. Very occasionally, as Dyke and Davidoff, have pointed out, a diagnostic encephalogram may be obtained. An entirely different aspect of encephalography in connection with this subject has recently come to my attention. In certain instances, it seems likely that encephalography may even result in the development of a subdural hematoma. This possibility will be illustrated by Case 8 and discussed in conjunction with it.

In view of the frequently normal cerebrospinal fluid pressure in the presence of severe headaches (Case 4), it is questionable if the headaches in these cases can be attributed always to increased intracranial pressure. Certainly in some instances, such increased intracranial pressure is present and could well account for the headache (e.g. Case 6). In others such is not the case and some other cause must be sought. It has occurred to me that this disintegrating blood may irritate the sensory nerves in the dura mater and account for the pain. Certainly that such broken-down blood is irritating is clearly shown by the clinical picture typical of subarachnoid hemorrhage.

The stupor is doubtless due to the cerebral compression and resulting cerebral ischemia. Psychotic manifestations are not uncommon, and they, as well as the convulsions, which occasionally occur, particularly in children, are doubtless related to this same generalized cerebral change.

Symptoms of localized cerebral involvement are often disturbingly absent as in Case 5. However, almost any type of localizing manifestation may be present. The most common symptoms of this type are those related to the pre-central cortex, paresis with spasticity, increased tendon reflexes and the sign of Babinski. Sensory changes are uncommon. Although it has been stated that aphasia and alterations in the visual fields do not occur, this is not true. I have recorded two instances of aphasia in this paper (Cases 2 and 4) and Naffziger and others have seen instances of homonymous hemianopia.

Encephalography. In pneumo-encephalography, it is not rare for the gas to pass through a rent in the arachnoid membrane and enter the subdural space. At times this air may form large collections between the brain and dura mater over the convexity of both cerebral hemispheres. This has usually been accepted as an innocuous development. A case has recently come to my attention in which it appears more than likely that this occurrence has been responsible for the subsequent development of bilateral subdural hematomas.

CASE 8

I. G., a salesman 66 years of age, was well until early in 1939, at which time he developed marked changes in his personality. He became slovenly in his personal appearance, disinterested in his family, began to commit little acts of petty thievery and to confabulate. By January, 1942, his behavior became intolerable to his family.

On January 7, 1942, he was admitted to another hospital. Neurological examination revealed no abnormal findings. The spinal fluid was normal. An encephalogram was performed. Three hundred fifty cc. of clear, colorless cerebrospinal fluid were removed and replaced by air. The encephalogram revealed no deformity of the ventricular system but very large collections of air in the subdural spaces

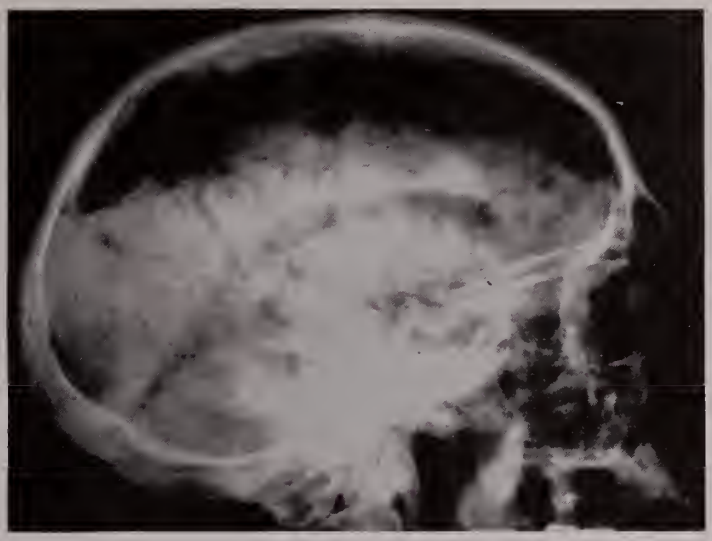


Figure 1

over both cerebral hemispheres (Figures 1 & 2). He became stuporous and although his stupor gradually lessened somewhat, his mental deterioration continued to be more profound than before.

On January 29, 1942, he was admitted to the Psychiatric Division of the Neuro-Psychiatric Institute of the University of Illinois. It was thought that he was probably suffering from a pre-senile dementia and a biopsy of the cerebral cortex was decided upon.

On April 6, 1942, Dr. Irving J. Speigel exposed the right frontal area. On incising the dura mater, a large subdural hemorrhagic cyst filled with a reddish brown fluid was found. This cyst was at least one and one-half inches deep. It extended from the frontal to the occipital pole. On April 14, a similar but much smaller cyst was evacuated on the left side.

Although he made an uneventful recovery from the operations. there has been little alteration in his mental state.

The entrance of air into the subdural space over the cerebral hemispheres allows those hemispheres to sag downward putting a great deal of traction on the veins entering the superior longitudinal sinus, as these and the pacchionian granulations are the hemispheres' only attachments to the vault of the cranial cavity. It would not be surprising if this pull were to produce small tears at the point of attachment of these veins to the sinus, thus allowing the escape of blood into the subdural space and resulting in the formation of a subdural hemorrhagic cyst as previously discussed.

It seems obvious in this case that no hematoma was present, when the encephalogram was made, for the space is filled with air and it is obvious that there could be no hematoma there. Yet



Figure 2

three months later, large subdural hematomas are found bilaterally. The conclusion seems obvious. And this case seems also to point to three rules to govern our future behavior in regard to pneumo-encephalography. First, it is probably unwise to remove large quantities of cerebrospinal fluid in this procedure. It is wise to stop when a maximum of 150 cc. of fluid have been removed regardless of whether more can be obtained or not. Second, the removal of fluid and injection of air or other gas should be done as gently as possible to avoid tearing the arachnoid membrane. And lastly, if air is accidently introduced into the subdural space, the patient should be kept in a nearly upright sitting position following the procedure to lower the pressure in the intracranial veins and diminish the amount of blood which will be extravasated.

Children. Repeatedly reference has been made here to the occurrence of subdural hematomas in children. Only in recent years has this condition received much attention and the fact that it is a relatively common neurological condition in children is still not well known. The following three cases are typical.

CASE 9

J. H., a male infant, was referred by Dr. Robert Black and Dr. Bengt L. K. Hamilton of Chicago. He was born normally on December 23, 1936 but was a little premature. He was well until March 12, when it was noted that his head was too large. He was admitted to the University of Chicago Clinics on May 24, 1937. The head measured 44.5 cm. in greatest circumference. The head was hydrocephalic in appearance. A needle was inserted through both lateral angles of the anterior fontanelle and xanthochromic fluid was aspirated from the subdural space on both sides. On May 27, 1937 a trephine opening was made on the right side. The subdural hemorrhagic cyst was evacuated, washed out and drained. The same procedure was repeated on June 3 on the left side. The infant recovered rapidly and left the hospital on June 14. The total protein in the fluid from the right side was 1020 mgm. % and from the left side 4090 mgm. %, as compared with spinal fluid with a normal protein content of 15 to 40 mgm. %.

When last seen on August 16, 1942, over five years after the operation he was perfectly well both mentally and physically and doing well in school.

CASE 10

N. V., a male infant, was referred by Dr. Willie Mae Clifton of the Children's Memorial Hospital, Chicago. This boy was born prematurely on January 11, 1937. The labor was easy and he seemed to be a normal child. In April, 1937, he suffered from his only convulsion. In June, it was first noted that his head was too large. On July 14 the lateral angles of the anterior fontanelle were punctured and bilateral subdural hematomas were found. These were punctured and aspirated repeatedly but without persistent improvement. On August 31, 1937, he was admitted to the University of Chicago Clinics. The head was large and measured 44.5 cm. in circumference. He was unable to hold his head up or to sit up. On September 1, a trephine opening was made on the left side and a large quantity of dark chocolate colored fluid was removed, the cyst irrigated and drained. On September 10, the same procedure was carried out on the right side. The child recovered rapidly and left the hospital on September 16.

CASE 11

R. W., a male infant, was referred by Dr. M. G. Peterman of Milwaukee and Dr. C. E. Pechous of Kenosha, Wisconsin. He had been born normally on June 13, 1938. In September he fell two feet off of a chair and landed on his abdomen on the floor. He did not seem to have been hurt. On November 20 he had a generalized convulsion and subsequently his head began to increase in size too rapidly. He was later seen by Dr. Peterman, who corroborated his diagnosis of subdural hematoma by aspirating dark reddish brown fluid from the subdural space on both sides. The child was admitted to the University of Chicago Clinics on January 7, 1939. The head measured 47.7 cm. in circumference. He was unable to sit up or even to roll over without assistance. The head had a hydrocephalic appearance. The child was operated upon on January 12. One hundred cc. of xanthochromic slightly bloody fluid was removed from the left side. The cyst on the right side contained only a small quantity of fluid. The child recovered rapidly and left the hospital on January 22. The child has been seen frequently since. He has developed normally. On January 5, 1942, when 3½ years old, his head measured fifty-one centimeters in circumference.

These three cases are sufficient to indicate that any child that suffers from a convulsion or begins to develop a hydrocephalic-type of head a few months after birth should be suspected of harboring a subdural hematoma. The diagnosis is readily confirmed or excluded by puncturing the subdural space through the lateral angles of the anterior fontanelle.

Ingraham who has seen and operated upon more of these children than anyone else says that any child who suffers from a chronic unexplained illness, vomiting, mental retardation, malnutrition, etc., etc., should be regarded as a possible victim of this condition.

It would seem in infants at least, (the condition may also less commonly occur in older

children) that the hemorrhage probably occurs as the result of trauma at birth and that the growth and development of the cyst follows the course outlined in the discussion of the condition in adults.

SUMMARY

Eleven typical cases of the collection of fluid in the subdural space have been presented. From these the following salient features can be drawn.

1. Collections of fluid may give rise to clinical pictures of variable rates of development and of variable intensity which permit of their classification as acute, subacute and chronic.

2. The material present in the subdural space may consist of liquid blood, coagulated blood, cerebrospinal fluid or disintegrating blood diluted by cerebrospinal fluid.

3. Cranial trauma alone may be an adequate etiological factor, particularly in acute and subacute cases.

4. (a) Frequently, particularly with chronic subdural hemorrhagic cysts, there is no history of trauma or the apparently exciting cranial injury is of a trivial nature.

(b) In such cases it must be concluded that the trauma if any was effective because of unusual fragility of the veins in the subdural space.

5. The bleeding usually comes from small tears in the veins passing from the cerebrum to the superior longitudinal sinus at their point of attachment to the dura mater. In instances of severe laceration of the cerebral cortex and the leptomeninx it may come from torn cortical vessels.

6. In acute and subacute cases the symptoms result directly from the accumulation of blood (or cerebrospinal fluid in cases of subdural hydroma) in the subdural space. These cases usually result from severe injury and may occur at any age.

7. In chronic subdural hemorrhagic cysts the trauma is often minimal. The victims are usually infants or adults beyond middle age. The symptoms result from a progressive train of events — a small amount of blood, which becomes encapsulated, disintegrates and thereby becomes hypertonic and then gradually increases in volume by the dialysis of cerebrospinal fluid through the arachnoid membrane.

8. Encapsulation results from a proliferation of fibroblasts which may come either by metamorphosis from the white cells of the blood or from the neighboring meninges.

9. The signs and symptoms of chronic subdural hemorrhagic cysts are often vague, variable and confusing.

(a) Headache is the most common symptom and is often severe. It may result from increased intracranial tension but in the absence of that may possibly be attributed to the irritating effect of disintegrating blood.

(b) Evidence of increased intracranial pressure, such as headache, vomiting, papilloedema and elevation of the spinal fluid pressure, may be present. But such intracranial hypertension is often conspicuously absent.

(c) Though encephalography may give useful diagnostic information, a negative pneumoencephalogram or one showing merely a diffuse ventricular dilatation does not exclude a subdural hematoma.

(d) Generalized cerebral compression may give rise to mental aberrations, stupor and generalized convulsions.

(e) Localized cerebral compression may give rise to any type of cerebral symptomatology including hemiparesis, sensory alterations, hemianopia or aphasia; though often there are no localizing manifestations.

(f) In infants subdural hemorrhagic cysts commonly result in enlargement of the head, convulsions, vomiting, malnutrition, etc.

10. It is not unlikely that large subdural collections of gas over the cerebral hemispheres, as a result of encephalography, may cause subdural hematomas.

11. In the majority of cases, simple evacuation, irrigation and brief drainage is a very satisfactory form of treatment.

CONCLUSIONS

It is obvious from a study of these few cases that subdural hematomas present most variable clinical pictures of cerebral disturbances. Accordingly the physician must always bear the possibility of the presence of a subdural hematoma in mind and in all cases where there is any likelihood of such a diagnosis, bilateral trephine openings should be made in the upper temporal regions. Fortunately, this is a simple and relatively innocuous procedure.

DISCUSSION

Dr. J. D. Kirshbaum, Chicago: I would like to ask Dr. Bucy whether he admits there is a true intradural hematoma. At autopsy I have seen these cases and if one sections the dura he can see hemorrhage coming from the vascular area of the dura. Personally I would like to admit that many of these cases are intradural in origin. The high incidence of alcoholism in this particular group of cases is interesting. In the cases I studied 80 per cent had admitted alcoholism. The question comes up whether we are not dealing with some vascular alteration due to the effects of alcoholism or avitaminosis. There has been a tendency to minimize true intradural hemorrhage.

Dr. Peter Bassoe, Chicago: It is true there is considerable ignorance about subdural hematoma among physicians including neurologists and neurologic surgeons, because the picture is manifold. It is especially difficult when the injury was slight and the interval between injury and hemorrhage long. The spinal fluid is most frequently clear and colorless which tends to make the average physician ignore the part played by the injury. Then, many other etiologic factors and symptoms are present that lead one astray. I can cite a typical case, which occurred on August 8, 1926. A man working on a farm was knocked over. He came into the house a few hours later and complained of headache. It was a busy time and he kept on working for six to eight weeks. Then he gradually became weak in the left side. I was asked to see him. I was told that he was queer, that he had fallen in love with an undesirable person. This man had a subdural hematoma. There was a large subdural organized clot about the size of the palm of my hand lying on the top of the hemisphere. If I had time I could tell you about many such cases, and one that Dr. Bucy knows about. A man was seen by another neurologist besides myself and a surgeon was called in consulation. The surgeon and I thought it was a brain tumor, the other neurologist encephalitis. The pathologist at autopsy found a subdural hematoma. On inquiry I learned that this man came home drunk and bruised up and the family had not told the doctors during the lifetime of the patient.

Dr. E. L. Benjamin, Evanston: It is a pleasure to hear Dr. Bucy's excellent presentation on this subject. Careful studies to ascertain changes in the vascular walls are important in understanding the pathogenesis of subdural hematomas. Dr. Kirshbaum has brought up the question of intradural hematomas. The late Dr. Jaffee considered the splitting of the dura to form intradural hematomas.

I would like to ask Dr. Bucy whether he thinks the hypertension was caused by subdural hemorrhage, and what is the relation of hyperthermia to subdural hematomas.

Dr. Edwin F. Hirsch, Chicago: I believe Dr. Bucy mentioned thrombosis of the cerebral veins and that the lesions in the brain were hemorrhagic. I would like to ask if hemorrhagic infarct is not a rather characteristic lesion with cerebral vein thrombosis.

Dr. Paul C. Bucy, Chicago (Closing): Dr. Kirshbaum has mentioned the possible relationship of alcoholism, and Dr. Bassoe that of syphilis to subdural hematoma. There are many who would deny that these conditions have any direct relationship to the condition. They recognize that a high percentage of the victims of subdural hematoma suffer also from one or both of these chronic conditions. They say, however, that the apparent relationship results from the fact that these people fall down and bump their heads more frequently than other people. Although I am not convinced by this simple explanation I do not know how to prove a more direct relationship.

Intradural hematomas, i.e., hemorrhage between the two layers of the dura mater, have not been discussed here. Many people apparently have been impressed with the occurrence of such hemorrhages. I have never seen one. That of course does not mean that they do not exist. I have looked carefully both at the operating table and at necropsy for such hematomas and none has been found. Accordingly I do not believe that such hematomas are commonly amongst those giving rise to clinical manifestations.

Dr. Benjamin, I do not know the cause for the hyperthermia which occurs in some of these cases.

Vascular hypertension has not been common amongst my cases and I do not believe that such hypertension is a common cause for subdural hematomas. There are of course no arteries or arterial branches in the subdural space which could bleed and cause this condition.

Dr. Hirsch has raised the question of the relationship of venous thrombosis to subdural hematomas. Dr. Hirsch is not talking about the usual cerebral thrombosis — apoplexy; but venous thrombosis. Thrombosis of the large dural sinuses and of the communicating veins commonly leads to hemorrhage both in the cerebral substance and into the subdural space. In most cases the intra-cerebral hemorrhage is the more important one. Recently, however, Dr. F. J. Lesemann and I have reported a case in which the subdural hematoma resulting from venous thrombosis was the most important feature of the case. (J.A.M.A. 1942, Vol. 119, pp 402-405). In that instance evacuation of the subdural hematoma relieved the patient of his cerebral symptoms.

THE RASCALS

My patients suffer tragic woe
And weep and wail and almost die,
But when my back is turned I know
They laugh a little on the sly!

DIFFERENTIAL DIAGNOSIS AND SURGICAL CARE OF JAUNDICED PATIENTS

Charles B. Puestow, M.D.
CHICAGO

Most careful clinical and laboratory studies and the best of medical judgment often do not enable one to distinguish medical or hepatogenous jaundice from the surgical or obstructive form. This is true especially when the patient is not seen until jaundice has been present for many weeks or months. As patients with hepatogenous jaundice often react badly to surgery, whereas the obstructive form of jaundice can be relieved only by surgery, it is imperative that every possible aid be employed to establish a diagnosis. The most important of these are clinical experience and judgment. Fortunately, jaundice rarely if ever is a surgical emergency and delay in operating permits both more accurate diagnosis and better preparation for surgery.

Theoretically, we should be able to distinguish between these two general types of jaundice by liver function tests and in the very early stages of jaundice, one often is able to do so. In hepatogenous jaundice there is primary damage of the liver cell and all of its functions may be diminished. Because of the tremendous reserve power of the liver and the wide latitude of normal readings in some functional tests, a considerable degree of liver damage is necessary to be manifested by abnormal readings. Other tests, however, will indicate very moderate cell pathology. Later the liver cell often partially recovers from its initial injury and although jaundice may increase or persist, some of the functional tests will return to normal.

Obstructive jaundice in its early stages causes little damage to the hepatic cell. We would, therefore, expect its functions to be normal and to note alterations only in the quantity of products of liver activity which are regurgitated into the blood stream. This is true for a short time after the onset of obstruction but due to back pressure upon the liver cells, alterations of their circulation and perhaps toxic influences, functional impairment gradually ensues and many of the laboratory tests may give results simulating intrahepatic jaundice.

Certain factors in the history and physical examination as well as laboratory studies help us to distinguish between various forms of jaundice although such findings are not sufficiently constant to be infallible. I would like to review the evidences of hepatogenous jaundice and of the three most common causes of obstructive jaundice, namely; biliary calculus, stricture of the bile ducts, and malignancy of the pancreas or ampulla of Vater. Each type will be illustrated by a patient presenting some typical and some atypical symptoms.

Hepatogenous Jaundice. The symptoms presented by patients with toxic or infectious intrahepatic jaundice vary somewhat with the cause of the disease. The infectious forms, such as catarrhal jaundice, usually run a febrile course with associated malaise and debility. The toxic forms often give a history which discloses the etiological factor, such as the ingestion of poisonous drugs or chemicals. These patients do not appear as acutely ill as those having the infectious type. Both present a gradually increasing jaundice without pain or pruritis. Although bile may disappear from the intestines for a short time in the early stages of the disease, it soon returns and is a constant finding thereafter. Examination may reveal the liver slightly enlarged and often tender. Depending upon the severity of damage to the liver, functional tests such as galactose tolerance, hippuric acid synthesis, bromsulphalein excretion, and blood protein levels, will reveal normal or reduced capacity and blood cholesterol may be normal or diminished. If this form of jaundice persists for weeks or months in a chronic form, certain changes occur. The patient may recover from his malaise and feel well enough to carry on normal activities. The amount of bile in the stool may increase or remain constant, that in the urine is likely to diminish. The skin may become more brawny in color and pruritis occasionally will develop. The liver loses its tenderness but remains enlarged and firm and the spleen frequently becomes palpable. Liver function tests more definitely indicate progressive damage to the hepatic cell. When a patient is seen for the first time at this stage, it often is

From the Department of Surgery, College of Medicine of the University of Illinois.

difficult to distinguish hepatocellular jaundice from certain of the obstructive forms, especially those due to "silent" calculi. As the disease progresses, liver insufficiency with ascites, weakness, and emaciation ensues.

The patient illustrating this form of jaundice began to have biliary colics and dyspepsia in 1920 when she was forty years of age. These symptoms persisted until 1930 when her gallbladder which contained stones was removed. She was comparatively symptom free for eight years when a painless jaundice was noted eighteen months before she came under our care. During this time she was afebrile, her weight was constant, appetite good, and she was able to do her work. The jaundice varied in intensity but never disappeared entirely. No severe pain occurred but she noted an aching in the liver. She also had frequent generalized abdominal cramps, often with loose stools. In the later months of her jaundice, she noted occasional but never marked itching. Her urine was constantly dark and the stools were light but were never free of bile. Liver function tests showed some evidence of cell damage, especially indicated by the retention of bromsulphalein.

This patient was suspected of having a hepatogenous form of jaundice. However, certain factors in her record were not typical and an obstructive jaundice possibly due to a silent stone cound not be ruled out. The history of a previous operation for stones in the gallbladder, the intermittent aching in the liver, the fluctuation in degree of jaundice, all could be associated with stone. After adequate preparation, the patient was explored and an advanced cirrhosis of the liver with normal bile ducts was found. The enlarged spleen was removed and the omentum transplanted to minimize the vascular load.

One year after this operation there was little change in her clinical condition and she still was able to do her work but the ultimate prognosis of course is not good.

Obstructive Jaundice. When obstruction to the extrahepatic bile ducts occurs, certain findings are constant irrespective of the nature of the lesion while other symptoms and signs will vary, depending largely upon the completeness of the obstruction and the presence or absence of infection. Mechanical obstruction of the ducts does not produce much change in the functional capacity of the hepatic cell and most liver function tests will reveal no change except for regurgitation products in the blood until secondary liver damage results.

Biliary calculi producing obstruction are diagnosed largely by their history. Long-standing biliary dyspepsia commonly precedes the onset or recurrence of jaundice. The degree of icterus varies greatly and it entirely disappears between attacks in most instances. Some bile usually is present in the stools but varies in amount inversely to the degree of jaundice. Pruritis frequently but not always is associated. Fever may or may not be present depending upon the existence of infection. The liver and spleen rarely are palpable but tenderness below the liver may exist. If such attacks are allowed to persist for weeks or months, definite liver damage will ensue and can be detected by laboratory tests. In from five to ten per cent of patients with obstruction due to stone, the jaundice may be constant and pain may be absent. When such patients are seen late and the liver has been damaged it may be difficult to distinguish their disease from hepatogenous jaundice.

The following patient illustrates this: A white female, fifty years of age, entered the hospital with a history of being well and free from pain or dyspepsia until two years ago. At that time she developed a generalized papular eruption over her entire body with associated pruritis, weakness, and progressive weight loss in spite of a good appetite. These symptoms continued without change until nine months ago when she developed a painless jaundice. The jaundice gradually increased and the stools which at first were very light in color later became and remained somewhat darker. She had no qualitative food distress and her only abdominal discomfort consisted of a sense of epigastric fullness relieved by vomiting. The vomitus frequently contained bile. At the time of admission to the hospital she had lost forty-five pounds in weight, was deeply jaundiced, and appeared weak and debilitated. Her skin was brawny in color and showed excoriations from scratching and also a diffuse papular eruption. The liver extended about one finger's breadth below the costal margin but was not tender. Bile was



Figure 1 — Roentgenogram after barium meal. Arrow indicates stone in common bile duct.

present in the stools and in the urine and urobilinogen was approximately normal in quantity. In studying liver function, the galactose tolerance test, hippuric acid excretion, serum protein levels, serum amylase, and prothrombin time were all within normal limits. The bromsulphalein test however, showed a fifty per cent dye retention at the end of thirty minutes. Blood cholesterol was elevated to seven hundred milligrams with sixty-one per cent free cholesterol. During three weeks of observation and conservative treatment, there was little change in the patient's condition or in her laboratory findings. The icterus index varied between forty and sixty units and was fairly constant. Bile persisted in the stools. A flat X-ray plate of the abdomen revealed ring shadows in the region of the gallbladder and also one in conjunction with the duodenum which we thought might be in the common bile duct (Figure 1). The patient was operated and a gallstone found impacted in the ampulla of Vater. It was removed through a transduodenal incision. The gallbladder which contained stones also was removed and a T-tube placed in the common duct. The patient recovered uneventfully although her jaundice was slow to disappear. At the time of dismissal from the hospital two weeks after operation, the icterus index had fallen to thirty, total cholesterol had dropped to 325 milligrams, and her bromsulphalein still showed a forty per cent retention of dye at the end of thirty minutes. Within the following thirty days her jaundice greatly diminished.

This patient's history, in a number of ways, is atypical for obstructive jaundice due to calculi. The persistent jaundice with only a slight degree of fluctuation, and the absence of pain and biliary dyspepsia are infrequent in this disease. Factors suggestive of an obstructive type of jaundice were; the presence of a marked pruritis, X-ray evidence of calculi in the bile ducts, normal findings in many liver function tests, and an increase in blood cholesterol.

Stricture of the common duct producing jaundice, fortunately is quite rare. As this condition almost invariably follows previous surgery upon the biliary tract, a history of such an operation will be obtained. Because infection in the bile ducts usually accompanies stricture of the choledochus, the patient will give a history of chills and fever. The degree of jaundice may vary in intensity but rarely returns to normal. Bile constantly is present in the duodenum and in the stool. Right upper quadrant pain of a generalized aching type or occasionally sharp in character may occur and be followed by increase in jaundice with elevation of fever and a diminution of bile in the intestine. The liver may become slightly enlarged and tender. Liver damage progresses more rapidly in this form of obstructive jaundice than in those in which infection is unassociated. This is manifested in the liver function tests. The disease usually is progressive and presents a difficult surgical problem often with unsatisfactory results.

The patient used to illustrate obstruction due to stone later presented an atypical history of stricture. For three months following her previous operation she remained free of jaundice and improved in general health. The T-tube was not removed because of the prolonged jaundice and liver damage. However, the tube was clamped. About six weeks ago this patient again became jaundiced. The jaundice increased steadily and was associated with pruritis. Cholangiograms revealed a marked stenosis but not complete occlusion of the distal end of the choledochus where the calculus had been imbedded (Figure 2). Although the T-tube was unclamped, drainage from it evidently was inadequate as was indicated by the persistence of her jaundice. Upon re-operating this patient



Figure 2 — Choledochogram. Arrow indicates point of stricture. Some opaque medium has been forced into the duoednum under pressure.

the distal end of the common duct was found to be strictured, evidently produced by extensive fibrosis following ulceration of the mucosa caused by the long impaction of the gallstone. An anastomosis was made between the common duct and the duodenum and the patient has recovered.

This patient's story is atypical for stricture in that she had no chills or fever or other evidences of associated infection.

Malignant lesions producing obstructive jaundice most frequently are located in the head of the pancreas but are not uncommon in the ampulla of Vater or bile ducts. The majority of these lesions produce symptoms which make the diagnosis apparent. The onset of jaundice is painless and progresses to its maximum in a fairly steady curve with little fluctuation. Pruritis almost invariably is present. A preceding history of biliary pain or indigestion is uncommon and symptoms of indigestion developing after the obstruction has occurred and indefinite in character. As infection rarely is associated with the obstruction, fever is uncommon. Examination of the patient reveals a gradually enlarging liver beneath the edge of which the distended gallbladder may be palpated. As obstruction usually is complete, bile will be absent from the duodenum and stools but will be present in the urine. Urobilinogen will be absent or diminished in the urine. In the early stages of obstruction, liver function tests will be within normal limits except for an increase of regurgitated products such as cholesterol and bile pigment in the blood. Little damage to the hepatic cell can be demonstrated by these tests even after a number of weeks or months of total obstruction.

The following case record illustrates an unusual history for this type of obstruction. Four months before a fifty-five year old white male was admitted to the hospital, he began to have attacks of vomiting. About a month later he developed what he thought was an attack of influenza with cough, thoracic pain, headaches, and malaise. He was bedridden for one week. Three weeks later he noted a gradually increasing painless jaundice. Nausea, anorexia, and some vomiting accompanied it and these symptoms persisted until the time of his hospitalization. He stated that his jaundice varied in intensity. During the first month of hospitalization jaundice persisted but fluctuated in degree and he was free of pain and pruritis. He ran a febrile course, his temperature reaching 102° to 103° each afternoon. The leucocyte count varied from 20,000 to 30,000 and remained elevated throughout this time. Bile was present in the stools upon repeated examination. The icterus index varied between thirty and forty units. The liver gradually enlarged, the edge extending two to three fingers below the costal margin. With these symptoms we concluded that we were dealing with an intrahepatic form of jaundice. At the end of the first month, the clinical pictures remained quite uniform except that the stools became clay colored and were free of bile. The icterus index increased to sixty units and there was a gradual development of slight pruritis. The febrile course continued and occasional chills were manifested. During the following six weeks the patient was

studied carefully in an effort to determine the nature of his jaundice. Occasionally, the degree of jaundice diminished and a slight amount of bile was found in the stools. At other times bile again became absent from the stools and there was an associated increase in jaundice. A secondary anemia developed which was combated by transfusions. At the end of the eleventh week, there appeared to be a slight improvement and it was decided to operate this patient. Exploration revealed a carcinoma of the head of the pancreas completely obstructing the common bile duct. No other pathological condition was found. A cholecystogastrostomy was performed following which the temperature subsided to normal and remained there. The jaundice rapidly cleared and he was dismissed from the hospital on the fifteenth postoperative day.

This patient presents an unusual history for obstructive jaundice due to carcinoma of the head of the pancreas. The febrile course throughout his illness, the absence of pruritis, the variation in intensity of his jaundice, and the intermittent appearance of bile in the stools are not common findings for this lesion.

DISCUSSION

Differentiation between the so-called medical and surgical forms of jaundice is often a difficult diagnostic problem. When the symptoms and findings are typical for a given lesion, the diagnosis can be made without difficulty. Too frequently, however, atypical findings obscure the picture and necessitate the use of every possible diagnostic aid. No single or group of criteria can give a definite differential diagnosis. This is true especially in jaundice of long-standing. A careful history of the disease, a thorough physical examination, frequent use of the laboratory, and daily evaluation of symptoms are necessary to determine the best form of therapy. Fortunately, jaundice is not a surgical emergency. Most patients react poorly to surgery when they are operated in the first few days of an increasing jaundice. There is considerable difference of opinion as to the most opportune time to operate upon jaundiced patients. Where the diagnosis is definite and the condition is a surgical one, operative therapy may be instituted if the patient has been properly prepared. Even under these circumstances, it is perhaps well to follow the dictum of not operating upon a patient who presents an increasing jaundice. Most obstructions due to stone will subside and permit the patient to become a better surgical risk. If the obstruction is complete, the degree of jaundice will increase to a maximum and remain there. The patient then can withstand surgery better than during the period of increasing jaundice.

Liver function tests are of greater value in determining the ability of a patient to withstand surgery than they are in establishing a differential diagnosis. When surgery is decided upon, every precaution should be taken to protect the damaged liver. The important functions of the liver relative to carbohydrate and protein metabolism must be protected by the ample administration of foods containing these elements. A restricted ingestion of fats is important. Additional vitamins should be administered to insure an adequate reserve. Proper fluid balance must be maintained. Although liver function tests can give us some information as to the various functions of the liver, it is well to consider all jaundiced patients as having a damaged liver and fortify it as much as possible. The use of vitamin K and bile salts gives added protection against hemorrhage. Where secondary anemia exists, blood transfusions should be given. Adequate postoperative protection of the liver must be maintained because of the increased damage resulting from the operative procedure itself. By such care of patients, it is safe to delay surgery for a number of weeks until one is thoroughly convinced that surgical treatment is indicated. Prolonged study, if combined with proper therapy for the protection of the liver, often will preclude surgery upon patients suffering with intrahepatic jaundice and rarely will jeopardize the future health of a patient whose jaundice is of obstructive origin.

AFTER THE DETAIL MAN HAS LEFT:

If you feel old
And worn and cold
Hormones are just the ticket
They make you strong
And ogle long
And cheerful as a cricket!

THE HEALTH ASPECTS INVOLVED IN FUEL RATIONING EXPLAINED

Abstract Of Report Medical, Public Health And Ventilating Expert Submitted To Government Is Published In Journal

Some of the medical and public health considerations involved in the recent announcement of the rationing of heating oil in thirty states and the District of Columbia are explained in the October 3 issue of *The Journal of the American Medical Association.* The article is an abstract of a report on the health aspects of fuel rationing as worked out by medical, public health and ventilating experts and submitted to the Advisory Committee, Fuel Rationing Division, U. S. Office of Price Administration, by a subcommittee headed by Leverett D. Bristol, M.D., Dr.P.H., New York. *The Journal* abstract says:

"Physicians, engineers and public health workers are accustomed to think of indoor heating and ventilation in terms of a 'comfort' zone. We may have to reorganize peacetime procedures in the direction of a 'discomfort' zone. Health should not be jeopardized; any rationing plan adopted should be based on equality for all, with special consideration for those of tender or advanced age, or those with actual disease or lowered vitality. Any plan must be preceded and followed through by an intelligent and extensive educational program directed by some federal agency in Washington, with whatever medical or public health assistance or leadership may be required. Centralized medical or public health advisory relationships will be of great help with state and local groups as well as at the federal level. A suggested slogan based on a popular song of the first world war is 'Keep the Home Fires Burning — *Low!*'

"In the past we have erred on the side of too high temperatures and too dry atmospheres. Temperatures must be kept down, but we must not err at the other extreme so that severe chilling and possible sickness may result. While most of our winter ills are due to bacterial and virus infections, scientific evidence shows the important relationship of lowered resistances and changes of weather to these conditions. There is little experimental evidence to show what an individual in a wartime economy can get along without in his artificial heat requirements without injury to health.

"Ventilation is not so much a matter of what we breathe in through our lungs as it is of how our skin and body react. It is more of a cutaneous [skin] than a respiratory problem. It is more immediately important to ventilate in the interest of the heat regulating mechanism of the body.

"An ideal temperature, irrespective of humidity and air motion, does not exist, nor does a safe minimum temperature exist without these influencing factors."

The report says that, without regard to other factors, the following may be considered minimum temperatures for emergency requirements for fuel oil rationing: for the average private home and apartment house, department stores, office buildings, and so on, 60-68 F. (majority opinion 65 F.), subject to local regulations or codes; for hospitals and sanatoriums, 68-80 F. (majority opinion 70 F. except operating rooms 80 F.), for schools, 60-70 F. (majority opinion 65 F.), subject to local regulations or codes.

"Indoor temperatures of dwelling places, hospitals, schools, stores and offices," *The Journal* abstract continues, "must vary according to the conditions and activities of occupants and the specific uses to which various rooms are put. All industries should carefully scrutinize their heating and ventilating equipment and practices to the end that winter indoor heating temperatures may be kept at the lowest possible point consistent with the efficiency of the workers. . . .

"Little or no attempt should be made to heat bedrooms, except those occupied by infants, aged persons or those who are ill. Bedroom temperatures may be from 50 to 60 F. The bathroom should be kept warm and a schedule set up for dressing and undressing in the bathroom. Warm night clothes and bed coverings should be provided. Living rooms should be kept at a suitable temperature at the expense of the dining room, halls and kitchen. The temperature should be lowered to 50 F. at night and local heat sources should be utilized. Drafts from windows, doors and fireplaces should be minimized by keeping windows and doors closed. Pulling down window shades at night screens the cold blast from the rest of the room.

"Reduced indoor temperature is less apt to injure persons in good physical condition and

having good health habits. The usual recommendations relative to exercise, sunlight, food and rest are stressed. Adequate clothing, and especially foot covering, is emphasized. Cold baths of short duration are recommended for certain persons. Overfatigue should be avoided.

"Indoor comfort and health depend on individual adjustments of clothing as much as on proper heating and ventilation. Double comfort standards between men and women are due largely to differences in dress or clothing. The application of this knowledge to individual situations would do much to prevent dissatisfaction and possible ill effects of cooler indoor temperatures and drafts during the winter. Every individual should be brought to realize that he is his own clothing engineer and that a heavier dress or suit, an extra undergarment or overgarment may do much toward winter health and comfort in overcool rooms. 'Wear a sweater and help win the war!' The body adjusts itself readily to temperatures at least 10 degrees below what we in the United States consider the standard temperatures for dwelling houses. The English, based on experience with radiant heat, believe that a 60 F. dry bulb temperature is adequate if room occupants are properly clothed. . . .

"Supplemental fuel oil should be allowed to homes in which there are children under 4 years of age, for whom a temperature of not less than 70 F. should be provided. This would also take care of the needs of the nursing mother. After the fourth birthday, normal children need a cooler and not a warmer environment than adults. Older people, particularly those of lowered vitality, should have a temperature of not less than 70 and possibly as much as 74 F. Consideration should be given to individual differences; some people are 'old' at 55, others are 'young' at 70. In general, supplemental rations should be made available for homes with 1 or more occupants over 65. Where there are 1 or more cases of acute or chronic illness or invalidism, the physician should be the judge of the need for supplementary fuel oil rations.

"The physician's place in administration and certification would consist in certifying to the ration board for the supplemental fuel oil rations for cases involving actual needs arising out of sickness and the infirmities of old age or other special cases. It might be desirable to have a local physician as a consultant or adviser to local ration boards. Consideration should be given to possible periods of abnormally cold weather and the possible occurrence of epidemics or threatened epidemics of disease and to communities which may accurately be described as health resorts."

Commenting on the report, *The Journal* says that on another page of this issue there "appears a statement relative to the health aspects of fuel rationing and a brief summary of the coupon rationing plan announced by the Office of War Production in a press release. The possibility that about three million homes and apartments in thirty states on the Eastern Seaboard and in the Middle West may have to be kept at reduced temperatures in the coming winter owing to a shortage of heating oil is of interest to physicians. Warmth may be required in certain circumstances for reasons of health, and physicians may be called on under the proposed regulations to certify to the necessity for supplemental oil allowances. Families in which there are 1 or more children under 4, 1 or more persons aged 65 or older and 1 or more cases of illness, convalescent persons, persons with low vitality or persons in circumstances which require the maintenance of a higher degree of room temperature than the temperatures now recommended may wish physicians to issue certificates. In the presence of a dearth of scientific information as to tolerable minimum temperatures, a medical advisory committee to the Office of Price Administration has been compelled to disregard the standard published recommendations for the comfort zone of heating and ventilation and to attempt to establish a safe zone at a lower temperature in which health could be considered adequately safeguarded and discomfort minimized. The Office of Price Administration has tentatively accepted the recommendations of the committee as set forth elsewhere in this issue. Local physicians may be called on by the local ration boards to act in an advisory and consulting capacity to the board. They may also be requested to certify to the necessity for supplemental fuel rations in excess of the standard allowance to meet the situations outlined."

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY
Louis Loeffler, M.D.

Decatur and Macon County Hospital
DECATUR

Case 1—DOUBLE LARGE INTESTINE

A widow, twenty-four years of age was admitted to the hospital March 3, 1940 with complaints of pain in the abdomen of several months duration and symptoms suggestive for mild intestinal obstruction. A large mass was felt in the left lower quadrant.

At operation a mass of adhesions was found in the left lower region with uterus and adnexae embedded and fixed to the sigmoid. A loose, strange looking piece of tissue, seen at operation was easily pulled out and peeled off the mesentery where it was loosely attached. There seemed to be no end to it, pulling and pulling disclosed a two finger thick tube-like organ about five to six feet long, both ends of which were connected with the large bowel, one end with the sigmoid, the other end with the colon somewhat above the cecum. There was almost no bleeding in removing this structure.

The connection with the sigmoid had to be severed by removing a portion of the sigmoid with which it was bound together with some adhesions to the uterus and adnexae. Soon after operation a peritonitis developed and the patient expired 14 days after opertion (3-25-40).

Pathological Report: The autopsy confirmed the general peritonitis and in addition revealed an extensive necrosis both of the cecum and sigmoid regions. Both these portions were entirely gone so that large empty spaces were seen and the open ends showed multiple perforations in a gangrenous bowel wall.

Several small thrombosed vessels in the neighborhood of cecum and sigmoid were embedded in adhesions and fresh pus. The rest of the large bowel and the entire small bowel and the mesentery appeared perfectly normal in their length and shape. There was nothing to suggest that a large portion of the bowel had previously been removed.

The other organs showed no significant pathology.

What the young lady in the picture (see Fig. 1) is holding in her hands represent 72 inches or 6 feet of a viscus organ; the width of the specimen is only 4 cms when opened, considerably less than a normal large intestine (see Fig. 2). Upon microscopic examination all three layers of bowel: mucosa, musculature and serosa are seen to be present (see Fig. 3).

We are dealing therefore with a double large intestine and with, I think, the first specimen ever seen of such a length. Because of the connections with ascending and descending colon as seen at operation this specimen can not be considered as a diverticulum.

DISCUSSION

Question: Anybody ever heard of such a thing?

Dr. Loeffler: There are several reports in the literature on the subject of double intestine the last and very good one comes from the Children's Hospital in Boston. However those specimens are double intestines of only short and normal length, from about the cecum to the sigmoid or mostly less than that.

Question: Have you had an x-ray taken?

CASE I



Figure 1 — Double intestine, 6 feet long, removed at operation.

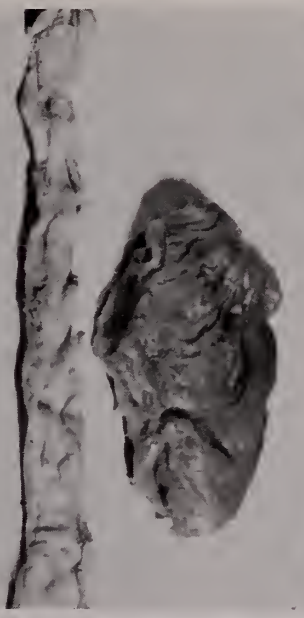


Figure 2 — Showing the width of the double intestine. A piece of normal sigmoid at the right.

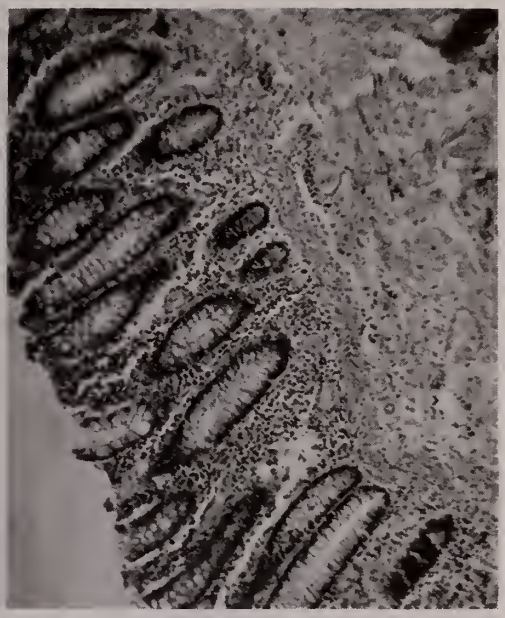


Figure 3 — Microscopically all three layers of intestine are present.

Dr. Loeffler: Sorry no x-ray was taken before operation.

Case 2 — CEREBRAL HEMORRHAGE IN PREGNANCY

Dr. Long: Patient Para I, 24 years, had whooping cough, measles, and scarlet fever when a child. For the last ten years her condition was excellent, only occasional cold and sore throat. Menstruation began at age of 14, 28 day type, 7 day flow, regular.

Patient was first seen in office for prenatal care June 12, 1941. Blood pressure was 110/70, and she was found to be in perfect condition. She visited the office again on the following dates:

7-16-41 B.P. 110/90
8- 7-41 B.P. 120/80
9- 4-41 B.P. 120/80 Feet swollen
10- 9-41 B.P. 120/80 Feet swollen
11- 6-41 B.P. 124/80 Feet slightly swollen

The morning of November 28, 1941 the patient complained to her husband of having a slight headache. She called him at noon at his work and talked to him. Her headache had gone and she felt all right. He called her at 3 o'clock in the afternoon. Her speech sounded thick, muddled, and incoherent. He went home and found her lying across the bed slightly comatose but she answered his questions. She was brought to the hospital at once.

Blood pressure was 140/90.

The patient never seemed to regain consciousness although she answered questions at times and showed some improvement.

Laboratory Data:

Urine essentially negative on three occasions.

Blood Count —

Hemoglobin 80%
Red cells 3,450,000
White cells 22,200
Polys 90%
Lymphs 8%
Monos 2%

Counts at 11-28-41 and 12-3-41 essentially the same.

Blood sugar: 87 mgs/100 cc (11-28-41)

N.P.N.: 24.5 mgs/100 cc (11-29-41)

Spinal fluid: 6 cells in cu mm. Globulin negative (11-30-41)

Patient went into labor with a blood pressure 142/90 and delivered a living male infant O.L.A. (12-4-41)

Following delivery her coma deepened and respirations on second post partum day became very labored. She developed a slight jerking of the right arm and right leg. Expired 12-6-41.

Dr. Loeffler: At post mortem examination a large hemorrhage in the left hemisphere around the stemganglia about 6 x 8 cms was found. The blood was partially liquid, partially clotted, dark red. The wall of the cavity was brown tinged.

The general aspect of the hemorrhage was such as is typically found in cases of hypertension in older people. Grossly and microscopically no tumor was found. There was no arteriosclerosis. The brain arteries were delicate corresponding to the age. The internal organs showed no significant pathology. The heart was normal.

We are dealing with a rather unusual case of cerebral hemorrhage during labor, without any anatomical bckground.

Dr. Long: I am very glad I got the permit for the post. It makes me feel better to see that nothing else could have been done for her.

Question: How old is the hemorrhage?

Dr. Loeffler: The history of the hemorrhage goes back about 8 days. The slight discolorization of the wall is in accordance with that.

Question: How is the child?

Dr. Long: The baby is well and doing fine.

Case 3 — MALIGNANT HYPERTENSION WITH ELECTROCARDIOGRAM OF CORONARY OCCLUSION

Dr. Goodyear: L. C., 20 years of age was always susceptible to colds, has had mumps and measles, no scarlet fever, was operated upon for ruptured appendix four years ago.

Known to have high blood pressure for two years, discovered on examination for life insurance which he passed. Two weeks ago onset of sinus trouble with frontal headache which later became general or occipital in type

His chief complaints for two months, are frequency and nocturia and lumbar backache; has had hematuria once and has lost 20 lbs.

Admitted to the hospital 11-21-41.

Tall, well nourished, weighing 178 lbs., coughing purulent bloody sputum, obviously sick.

Pulse 108, regular. Apex beat 2 cms to the left and below the nipple. B.P. 204/144.

Urine: Specific gravity between 1.010 and 1.014. (3 occasions)

Albumin 4+ Sugar — negative

Field full of red cells and clumped white cells.

P.S.P. excretion 19% in two hours.

Blood: Hgb 94%
Rbc 4,460,000
Leucocytes 13,600
Polys 59%

N.P.N. 101 mgs/100 (11-23-41) and over 300 mgs/100 cc (12-4-41) B.M.R. —5

Slight and irregular elevation of the temperature during stay in hospital. Uremia developed and he expired 12-6-41.

Clinical Diagnosis: Malignant Hypertension, Nephrosclerosis, Uremia.

Dr. Loeffler: Anatomical Diagnosis:

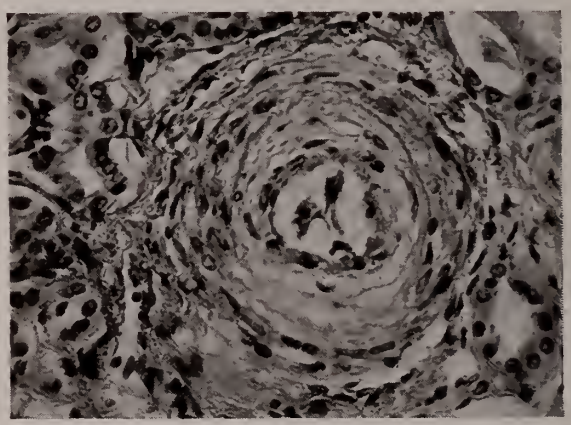
Enlarged heart, weighing 700 grams.

Slight smooth atrophy of the kidneys (140 grams each).

Passive Congestion — Bronchopneumonia.

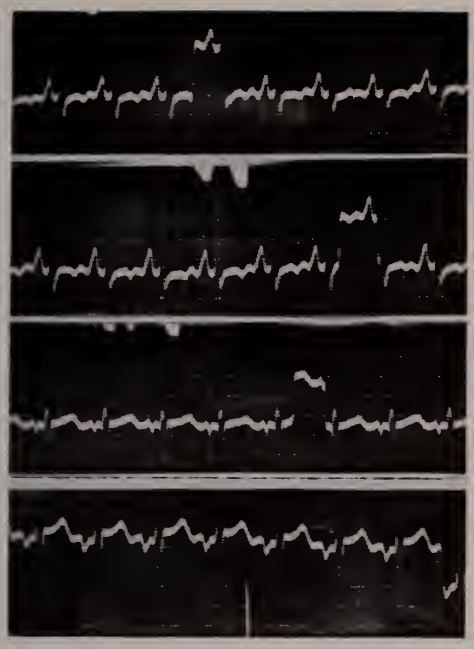
Microscopically: Kidneys: There is a slight fibrosis of the cortex with the glomeruli and tubuli practically intact.

There is an extreme narrowing of the smaller arteries and arterioles, while the larger intrarenal arteries and the finest branches are rather intact. The lumina are nearly occluded by edematous fibrous tissue, with the elastic fibers but slightly multiplied (see Fig. 4).



Case 3, Figure 4 — An example of the narrowing of the arterioles of the kidneys in malignant hypertension.

There is no definite necrosis of the small arteries, but there are some areas with pycnotic nuclei and disorganization of the arterial wall at some places. The other organs show no changes of the arterioles.



Case 3, Figure 5 — Electrocardiogram in malignant hypertension with uremia, resembling the coronary type.

The clinical as well as the anatomical findings are typical enough to call this case one of malignant hypertension.

Very interesting is the electrocardiogram (see Fig. 5). It is the main reason the case is presented and I would like to ask Dr. Rose to explain it shortly to us.

Dr. Rose: The electrocardiogram was taken 11-21-41 because the patient showed symptoms suggestive of coronary occlusion. The main findings are: The T waves are inverted in leads I and II. S-T segments are cove shaped in leads I and II. There is left axis deviation. A coronary type as this EKG represents does not necessarily mean a coronary occlusion. The post mortem findings showed the coronaries to be patent and not sclerosed. Thus this is a rather typical case of a coronary type of electrocardiogram found in a case of malignant hypertension with uremia.

It is worth while to mention this specifically, because it is not generally known although stressed in the literature.

Dr. Goodyear: I was most impressed by the narrowing of the arterioles of the kidneys so beautifully demonstrated here in kodachromes.

NERVOUS AND MENTAL EFFECTS OF SULFONAMIDE DRUGS

An admonishment that it is possible that the synthesis of new and more powerful derivatives of sulfanilamide will be brought to a standstill by the disappointing discovery that the more toxic or poisonous these drugs are to bacteria the more toxic they are to the human cell, is made by Sam C. Little, M.D., Ann Arbor, Michigan, in the *J.A.M.A.* for June 6.

Dr. Little says that it now is generally agreed that the mode of action of the sulfonamide drugs is bacteriostatic (inhibiting growth) and that it is not unlikely that many of the toxic effects are an integral part of the effect of the drugs on cells, whether bacterial or human.

"Animal experiments seem to indicate that all members of the sulfonamide group have a toxic effect on the nervous system, the parent substance, sulfanilamide, being the least toxic and some of the newer derivatives being the most toxic," he says. "A review of the clinical reports, in general, confirms the results of the animal experiments. The drugs appear to be more neurotoxic (poisonous to the nervous system) in the presence of pre-existing disease of the nervous system.

"The following abnormal conditions have been reported as due to the use of the sulfonamides: dysmorphosia (distorted vision), aphasia (loss of power of expression by speech, writing, or signs or of comprehending spoken or written language), agraphia (inability to express thoughts in writing), stammering, toxic psychosis, peripheral neuritis (inflammation of the nerves of the skin), encephalomyelitis (inflammation of the brain and spinal cord), myelitis (inflammation of bone marrow), optic neuritis (inflammation of the nerves of the eye), transitory myopia (nearsightedness), meningeal signs (of the membrane enveloping the brain and spinal cord), blindness, and convulsions."

. . . . "Education is the capturing of opportunity, and it is the miracle of opportunity that makes democracy. For opportunity can exist only to the degree that life about you — the law above you — the institutions around you — and the will within you — reflect the natural rights of man which within our own history have been written as life, liberty, and the pursuit of happiness. . . ."—*Governor McGrath, of Rhode Island, in a graduation address at Manhattan College.*

A bachelor is a man who has no children — to speak of.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

Dr. Loyal Davis, head of the surgical department of Northwestern University Medical School, Chicago, and editor of *Surgery, Gynecology* and *Obstetrics,* has been commissioned a lieutenant colonel in the U. S. Army Medical Department and assigned to duty as consultant in neurosurgery in the Surgeon General's Office, Washington, D. C. Dr. Davis served in the first world war and from 1922 to 1924 was associated with the late Dr. Harvey Cushing of Boston. He then came to Chicago as associate professor of surgery at Northwestern and in 1932 became head of the department of surgery.

Lieut. Wilbur G. Ball, USNR, of 1110 East Monroe St., Bloomington, Ill., has been named Medical Officer at the U.S. Naval Training School, for signalmen, University of Illinois, Urbana, Ill.

The new school, recently opened on the University campus, has accommodation for 800 men who will be chosen as the result of a series of aptitude tests given during their recruit training period. Following successful completion of this specialized course of training they will be sent to sea for duty with the fleet, or to a Naval shore station.

He is a member of County and State Medical Societies, the American Medical Association and the International College of Surgeons.

Charles Drueck, Jr. addressed the Marion County Medical Society on "The Vitamin Controversy," September 17.

Harry Leichenger gave a talk on Poliomyelitis before the McLean County Medical Society on September 8.

Dr. Ralph A. Kordenat of Chicago has been appointed vice chairman for Cook County for the Procurement and Assignment Service.

William D. McNally addressed the LaSalle County Medical Society, September 24th, on "The Physician and the Coroner's Office."

Norris J. Heckel addressed the Macon County Medical Society September 22nd on "Urology."

James H. Hutton has been invited to give an address at the Nurses Graduation exercises of the Cottage Hospital, Galesburg, on October 6.

A complete course on Electrocardiography Interpretation is being given in the educational program for interns and residents of Mercy Hospital. These lectures are given by George Hellmuth Wednesday at 6:00 P. M. and Saturday at 1:00 P. M. during September and October in the Library of Mercy Hospital. Any doctor that wishes to attend is cordially invited.

Frank L. Jenkins gave a health talk on September 3rd at Camp Lake, Wis., to the Officers attending the Third Annual Refresher Course of the Salvation Army. On September 8th, he addressed the older Officers at their first Seminar Session at Camp Lake.

The Department of Pathology of Cook County Hospital will resume Pathological Conferences beginning Thursday, October 1st. These conferences are in the morgue building between 11 A. M., and 12 noon.

COMING MEETINGS

The Post-Graduate Service Committee of the Illinois State Medical Society sponsored its first clinical conference of the year at Mt. Vernon, Illinois on Thursday, October 8th. The local doctors were hosts to all visiting physicians at luncheon and the program started at 1:30 with forty-five minute talks on

"The Minimum Requirement in Treatment of Fractures"

"Management of Burns"

"Recognition and Treatment of Shock"

"Treatment of Soft Tissue Injuries"

"The Oral, intravenous and intra-abdominal uses of sulfonamides"

Dinner was served at 6:00, followed by a talk on

"Procurement and Assignment" by Doctor Camp and a talk on

"Diseases to which Our Troops will be Exposed."

October 22 — POST GRADUATE CONFERENCE — Peoria — Banquet Room of the Hotel Jefferson. Program will start at 1:30 with forty-five minute papers on Burns, Fractures, Sulfonamides, Soft Tissue Injuries, Shock. Dinner at 6:30 followed by talks on "The Doctor Goes to War" and a talk on some subject in General Medicine. All physicians are invited to attend this Conference.

October 6 — Vermilion County Medical Society, Hotel Wolford, Danville — 6:30 P. M.

October 6 — Effingham County Medical Society — Benwood Hotel, Effingham — 6:30 P. M. — Darwin Kirby, M. D., "Emergency Surgery."

October 6 — Williamson County Medical Society — Herrin Hospital, Herrin — 8:00 P. M. — Hugh McCulloch, M. D. — "Newer Things in Pediatrics"

October 8 — Crawford County Medical Society — Woodworth Hotel — Robinson — 6:00 P. M.

October 8 — Post-Graduate Conference, Mt. Vernon

October 9 and every Friday — Will-Grundy County Medical Society — Louis Joliet Hotel, Joliet — 12:15 noon

October 12 — Hancock County Medical Society — Court House, Carthage 8:00 P. M. — R. F. Herndon, M. D. — "Physiological and Pathological Aspects of Nephritis"

October 13 — Adams County Medical Society —Lincoln Douglas Hotel, Quincy — 8:15 P. M. — F. E. Senear, "Eczema and External Irritants"

October 15 — Tri-County Medical Society — Kewanee — 4:00 P. M. — two papers on gynecology, dinner, speaker on x-ray and radium therapy in gynecology

October 20 — Macon County Medical Society — 6:30 P. M. — Decatur

November 3 — Vermilion County Medical Society — Danville — 6:30

November 5 — Southern Illinois Medical Society

November 10 — Adams County Medical Society — Lincoln Douglas Hotel Quincy — 8:15 P. M. — R. W. McNealy — "Gall Bladder Disease"

November 12 — Crawford County Medical Society — Robinson — 6:30

DEATHS

William A. Campbell, Chicago; Toronto University College of Physicians and Surgeons, Ontario, 1892. Head examiner of the Chicago office of the Mutual Benefit Life Insurance Company for 30 years. Died of a heart attack on August 31, 1942, aged 71 years.

Arthur Francis Daly, Chicago; Loyola University School of Medicine, 1922. Died September 13, 1942 at the age of 46 years.

Oliver C. Davis, Joliet; Chicago Homeopathic Medical College, 1882. Died August 22, 1942 at the age of 85 years.

Guy D. Doremus, Peoria, Ill.; Curtis Physio-Medical Institute, Marion, Ind., 1894; aged 76; died, June 14, of carcinoma of the pancreas.

Monroe Garrison, Chicago; Loyola University School of Medicine, 1933. Clinical associate in orthopedic Surgery at Rush Medical College, on staff of St. Mary's, American and Little Company of Mary Hospitals. Died September 17, 1942 at the age of 34.

Archie T. Gibson, Morrisonville; Barnes Medical College, St. Louis, Missouri, 1896. Practiced in Morrisonville for 46 years. Died September 9, 1942 at the age of 69.

Clinton H. Gilmer, Villa Grove; Kentucky School of Medicine, 1888. Died August 31, 1942 at the age of 76 years.

Ernest A. Green, Grayville; Barnes Medical College, St. Louis, Missouri, 1898. Retired for several years. Died August 29, 1942 at the age of 70 years.

Edgar E. Kilby, Mackinaw; College of Physicians and surgeons, Keokuk, 1896. Died August 17, 1942 at the age of 71 years.

Louis C. Littlejohn, Oconee; Medical College of Ohio, Cincinnati, 1885. Practiced in Oconee for 50 years. Died August 27, 1942 at the age of 84.

Walter Louis Migely, Naperville; Northwestern University Medical School, 1910. President of the Board of Health at Naperville. He was former president of the DuPage County Medical Society and former president of DuPage County Tuberculosis Association. He had practiced in Naperville for 30 years. Died September 13, 1942 at the age of 58 years.

Frederick R. Mueller, Chicago; University of Vienna, Austria, 1896. He was professor emeritus at Loyola University School of Medicine; on the staff of Columbus Hospital. He died September 10, 1942 at the age of 71.

Knut Waldemar Paulson, Chicago; Bennett College of Eclectic Medicine and Surgery, Chicago, 1908; aged 73; died, July 6, in the Lutheran Deaconess Hospital of cerebral hemorrhage.

Hugo V. Pribyl, Chicago; Rush Medical College, 1899. On staff of Jackson Park Hospital. Died September 20, 1942 at the age of 72 years.

Stephen Walter Ranson, Chicago; Rush Medical College, 1907. Professor in neurology and Director of the Institute of Neurology at Northwestern University Medical School. Author of textbook "The Anatomy of the Nervous System" and contributor to scientific journals and a member of the editorial board of the Archives of Neurology and Psychiatry. Died August 30, 1942 at the age of 62.

Albert A. Roth, Chicago; University of Illinois College of Physicians and Surgeons, 1905. Member of the Chicago Board of Health for many years. Died August 27, 1942 at the age of 67 years.

Emile D. St. Cyr, Chicago; Rush Medical College, 1888. Chicago physician for more than 55 years. Died August 25, 1942 at the age of 76 years.

Ida M. Woolley, Ottawa, Ill.; Keokuk (Iowa) Medical College, College of Physicians and Surgeons, 1901; aged 77; died, July 20, of cerebral hemorrhage.

MARRIAGES

Joseph L. Spezia, Herrin, Ill., to Miss Eileen O'Keefe of Chicago in June.

INTER-AMERICAN PUBLICATION

The simultaneous publication of the June issue of *Annals of Surgery* in Philadelphia by the J. B. Lippincott Company and in Buenos Aires by the Guillermo Kraft Company was a new step toward the consolidation of medical interests here and in South America.

The *Annals of Surgery* is the oldest surgical journal in the English language. Its appearance in Spanish marks a high spot in the Lippincott Company's celebration of its sesquicentennial this year.

As the result of negotiations and with the assistance of the Coordinator of Inter-American Affairs, and Mr. Lewis Hanke, Director of the Hispanic Foundation, Guillermo Kraft Company, one of the oldest and most respected publishing firms in Buenos Aires, is translating the *Annals of Surgery* each month for South American physicians and surgeons.

The medical profession in this country has become increasingly aware of its obligations and responsibilities in South America. No better symbolic demonstration could be given of its sincere willingness to develop permanent intellectual fraternization between the surgeons of the two continents.—*N. Y. State Jour. of Med.*

WHICH SIDE OF THE QUESTION ARE YOU ON?

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OR

Should the problem of infant feeding be kept where it belongs — in the hands of the medical profession?

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Book Reviews

PHYSICAL DIAGNOSIS, Thirteenth Edition, Cabot and Adams. By F. Dennette Adams, M. D., Instructor in Medicine, Harvard Medical School, Courses for Graduates. Physician, Massachusetts General Hospital. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1942. Price $5.00.

Although the first edition of this ever popular book was brought out by Dr. Cabot in 1900, this, the thirteenth edition, will no doubt be equally popular with the thousands who for many years have consulted it freely.

Dr. Adams who collaborated with the late Dr. Cabot on the previous editions, has carried on the traditional principles of previous publications giving todays knowledge, experience and teachings of the staff of the Massachusetts General Hospital. The relationship of physical signs and clinical conditions is well brought out.

Any physician studying the nearly 900 pages of this large book carefully should become a better diagnostician. The price remains the same, $5.00 for a larger well illustrated book which will always remain most fascinating to the readers.

A TEXTBOOK OF GYNECOLOGY. By Arthur Hale Curtis, M. D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School; Chief of the Gynecological Service, Passavant Memorial Hospital, Chicago. Fourth Edition, Reset. With 401 illustrations chiefly by Tom Jones. W. B. Saunders Company, Philadelphia and London, 1942. Price $8.00.

This, the fourth edition of this popular book, has been changed materially from the last edition. The use of the newer drugs, especially of the "sulfa" group in gynecology, is outlined in some detail.

The author states that for the first time he has adequately expressed his views relative to the management of uterine displacements. Throughout the book will be found many new expressions, and it will unquestionably be of much value not only to the student but to many physicians who must do gynecological work as a part of their practice.

There are 401 illustrations in the book, the major portion of which were drawn by that famous medical artist, Tom Jones. Once more, the Textbook of Gynecology by Curtis will be of definite value to the many physicians and students who will consult it freely.

THE HAND, Its Disabilities and Diseases. Condict W. Cutler, Jr., M. D., F. A. C. S., Associate Surgeon, Roosevelt Hospital; Director of Surgery, Welfare Hospital; Consulting Surgeon, New York Dispensary; Chief, Emergency Medical Service, New York County; Fellow of the American Surgical Association. With 274 illustrations. W. B. Saunders Company, Philadelphia and London, 1942. Price $7.50.

In these days of mass production with the

(*Continued on page* 30)

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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

TO PHYSICIANS WHO SMOKE A PIPE: We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

BOOK REVIEWS (Continued)

thousands of plants throughout the country employing many new men each day, with the automobile accidents, ever increasing burns, etc., the subject of hand disabilities is rapidly becoming of greater interest to all members of the medical profession.

The end results in hand disabilities is directly in proportion to the ability of the attending physician in making the correct diagnosis early and applying the proper type of medical or surgical therapy.

As would be expected in a book of this subject, the author first describes in minute detail the anatomy of the hand, then discusses the many acute infections with the proper treatment for each. Specific and chronic infections of the hand with the etiology, symptoms, diagnosis and treatment are taken up in detail.

Fractures and dislocations of the hand, deformities, (congenital and acquired) are described and the proper treatment suggested.

A considerable amount of space is devoted to the reconstruction of deformities and the disabilities resulting from infections, burns, and trauma.

The author devotes thought and time to the consideration of amputations, the various types of tumors found on the hands, etc. The effects of constitutional diseases on the development of the hands are also well described.

Indeed, the book should be welcomed by those who in their general office routine, come in contact with many disabling affections of the hands.

Fractures, Dislocations and Sprains, By John A. Key, M. D., and H. E. Conwell, M. D., The C. V. Mosby Company, St. Louis. Price. ——.

This is the third edition of this excellent book which gives the latest information on the subject of fractures, dislocations and sprains. Much new material will be found throughout the book as it has been brought completely up to date.

In keeping with the advancements in the subject a new chapter on war injuries has been included in this latest volume. Likewise the use of the sulfonamides has been given much consideration. The sections dealing with spinal injuries has been considerably enlarged and will be of interest to men in industrial work and others who see these dreaded accidents.

This is an outstanding work on the subjects of fractures, dislocations and sprains, well illustrated and completely modern.

Carcinoma and other Malignant Lesions of the Stomach. By Waltman Walters, B. S., M. D., M. S. in Surgery, D. Sc., F. A. C. S., Surgeon at Mayo Clinic. Professor of Surgery, University of Minnesota; Commander, Medical Corps, U. S. N. R.; Diplomat of the American Board of Surgery; Member, National Advisory Cancer Council.
By Howard K. Gray, B. S., M. D., M. S. in Surgery, F. A. C. S., Surgeon at Mayo Clinic; Associate Professor of Surgery, University of Minnesota; Lieutenant Commander, Medical Corps, U. S. N. R.; Diplomate of the American Board of Surgery.
By James T. Priestly, B. A., M. D., M. S. in Experimental Surgery, Ph. D. in Surgery, F. A. C. S., Surgeon at Mayo Clinic; Associate Professor of Surgery, University of Minnesota; Major, Medical Reserve Corps, U. S. Army; Diplomate of the American Board of Surgery; and Associates in the Mayo Clinic and Mayo Foundation, Rochester, Minnesota. With many Illustrations. W. B. Saunders Company, Philadelphia and London, 1942. Price $8.50.

Malignancies of the stomach are not so rare as many have thought in the past and with the present day methods of diagnosing these conditions in the early stages, much can be done to prolong life when the diagnosis and proper therapy are made available early.

Having an unusual opportunity to observe many hundreds of these cases each year, the authors have given much valuable information to the medical profession in this monographic work. A review of all cases seen at the Mayo Clinic over a period of 31 years diagnosed as malignant lesions of the stomach were reviewed and carefully analyzed. 11,000 cases were thus reviewed; 6,352 of them were operative and 2,840 were resections.

In the book the authors have endeavored to give a detailed review of the subject beginning

(*Continued on page* 33)

BOOK REVIEWS (Continued)

with the history of knowledge concerning cancer of the stomach, the methods of examination, indications for treatment and the exact therapy for the various types of cases. Surgical technique, after care, choice of anesthesia, roentgenological treatment, prognosis, and end results are all well covered.

The book will be of especial interest to those surgeons who meet these problems in their practice.

TREATMENT IN GENERAL PRACTICE. FOURTH EDITION. By Harry Beckman, M. D., Professor of Pharmacology, Marquette University School of Medicine, Milwaukee, Wisconsin. Thoroughly Revised, 1015 pages. Philadelphia and London: W. B. Saunders Company, 1942. Price $10.00.

Many new maladies are discussed in this, the fourth edition of this unique book. The author deplores the fact that therapeutics has been seriously neglected in many text books on Medicine, and he has endeavored to elaborate on all that is best along the line of therapy for each of the diseases outline.

The newer drugs of proven value used today in treatment are well discussed. Those of questionable value are mentioned, but the more desirable and generally approved therapeutic agents, whether drugs, foods or vitamins, are outlined in connection with disease.

Physicians and students of medicine will find much material of value in this book, and it will no doubt be a welcome addition to many medical libraries throughout the country.

THE NATIONAL FORMULARY. Seventh Edition. Prepared by the Committee on National Formulary. Authority of the American Pharmaceutical Association. Official from November 1, 1942. Published by the American Pharmaceutical Association, Washington, D. C.

The seventh edition of the National Formulary was prepared by the Committee on Na-

(*Continued on page* 34)

BILE ACID THERAPY

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BOOK REVIEWS (Continued)

tional Formulary on authority of the American Pharmaceutical Association.

The book, as in previous editions, gives complete information on many drugs, chemicals and preparations used in the practice of medicine. The exact composition, method of preparation, description and average dose for each preparation are given.

The second part of the book contains much valuable information on reagents and preparations used in clinical laboratories, test solutions, etc., used for many chemical examinations and determinations. Staining solutions and special techniques will also be found.

The National Formulary in addition to being indispensible to the pharmacist, will be of much value to many physicians and should find a definite place in the modern medical library.

Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

Contraception and Fertility in the Southern Appalachians. By Gilbert Wheeler Beebe, Ph. D., Former Statistician, National Committee on Maternal Health; Research Associate, Milbank Memorial Fund. Published for the National Committee on Maternal Health, Inc. By The Williams & Wilkins Company, Baltimore, 1942. Price $2.50.

Demonstrations of Physical Signs in Clinical Surgery. By Hamilton Bailey, F. R. C. S. (Eng.) Surgeon, Royal Northern Hospital, London; Surgeon and Urologist, Essex County Council; Surgeon, Italian Hospital; Consulting Surgeon, Clacton Hospital and the County Hospital, Chatham; External Examiner in Surgery, University of Bristol. Eighth Edition, revised, with 455 illustrations, a number of which are in Colour. A William Wood Book. The Williams & Wilkins Company, Baltimore, 1942. $7.00.

Advances in Pediatrics. Editor, Adolph G. DeSanctis, M. D., New York Post Graduate Medical School and Hospital, Columbia University, New York, N. Y., Volume I, Interscience Publishers, Inc., New York, N. Y., 1942. Price $4.50.

Clinical Anesthesia: By John S. Lundy, B. A., M. D., Head of Section on Anesthesia, Mayo Clinic; Professor of Anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; Diplomate and Member of the American Board of Anesthesiology, Inc.; Member of the Subcommittee on Anesthesia, National Research Council. 771 pages with 266 illustrations. W. B. Saunders Company, Philadelphia and London, 1942. Price $9.00.

Traumatic Surgery of the Jaws, Including First-Aid Treatment: By Kurt H. Thoma, D. M. D. Professor of Oral Surgery and Brackett Professor of Oral Pathology, Harvard University; Oral Surgeon to Brooks Hospital; Consulting Oral Surgeon to New England Baptist Hospital; Visiting Oral Surgeon, Beth Israel Hospital; Surgeon, Dental Department, and Consultant to Tumor Clinic, Boston Dispensary. With 282 illustrations. St. Louis. The C. V. Mosby Company, 1942. Price $——

War Medicine. A Symposium. Editor, Winfield Scott Pugh, M. D., Commander, (M. C.) U. S. N. Retired, Formerly Surgeon, City Hospital, New York. Associate Editor, Edward Podolsky, M. D. Technical Editor, Dagobert D. Runes, Ph. D. New York, Philosophical Library, 1942. Price $7.50.

Librarian: "It's time for closing, sir. Is there anything you'd like to take out?"

Student: "Yes, there is. How about the blonde in the blue dress?"

The boss of the circus asked the doctor: "What is actually wrong with this patient?"

The doctor said: "He has broken his humerus."

"Well," said the boss, "that's hard lines, as he was the best comedian I ever had."

—*The Doctor Od Quarterly*

THERE IS EVERY REASON TO BELIEVE VACCINATION AGAINST YELLOW FEVER IS WARRANTED

Statements made in an editorial in the Chicago *Tribune* regarding the development of jaundice among army personnel in connection with yellow fever vaccination are "unwarranted" and "wholly unjustified," *The Journal of the American Medical Association* declares. *The Journal* says "There is every reason to believe that vaccination against yellow fever is warranted and that the occurrence of 62 deaths and some 28,000 cases of jaundice associated with the vaccination of millions of men is far less serious than would be an epidemic of virulent yellow fever among soldiers sent to the tropical areas in which our army is now engaging the enemy."

The Journal charges that the *Tribune* by publishing such an editorial has done a disservice to American medicine and that "by the fears it may create among the soldiers now being inducted into our armed forces it will injure morale and make more difficult the task of assembling the type of force that must be assembled to meet the challenge of our enemies."

"The charge has been made by the Chicago *Tribune* (July 27, 1942) that the medical department of the United States Army and thereby our government has been 'guilty of a grievous error of judgment.' The *Tribune* asks 'How did it happen that wholesale vaccinations were undertaken with a vaccine which quite obviously had not been thoroughly tested in advance?' The statement in the Chicago *Tribune* is unwarranted. Testing had been adequate. The vaccine had been

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tested in hundreds of thousands of cases. The procedure is, however, a new one and, as with all procedures in the field of medicine, the use of any new technic in the field may yield information which is quite different from that obtainable on preliminary testing. There is every reason to believe that vaccination against yellow fever is warranted and that the occurrence of 62 deaths and some 28,000 cases of jaundice associated with the vaccination of millions of men is far less serious than would be an epidemic of virulent yellow fever among soldiers sent to the tropical areas in which our army is now engaging the enemy.

"The American Army has always been the most healthy army in the world. Its sickness and death rates today are, even with the temporary invalidism associated with the vaccination, far less than those of similar age groups in civilian life. This fact warranted the statement published in *The Journal* on July 18 that 'the total number of cases in the entire army has not been enough to appreciably increase the admission rate for all diseases.' By the type of editorial that has been printed, the Chicago *Tribune* has done a disservice to American medicine. Certainly by the fears it may create among soldiers now being inducted into our armed forces it will injure morale and make more difficult the task of assembling the type of force that must be assembled to meet the challenge of our enemies. The haste with which the editorial must have been prepared certainly made impossible the kind of scientific investigation on which charges such as the *Tribune* has made ought to be based."

In another section of the same issue of *The Journal* is the following report:

"A review of the work of the Rockefeller Foundation for 1941 by the president, Raymond B. Fosdick, states that 'in 1936 the laboratories of the International Health Division of the foundation developed a vaccine which provides active immunity against yellow fever after a single injection. As a result of the war emergency the demand for this vaccine has been so great that, in order to produce it in the quantities required, the foundation has had to double both its laboratory space and the number of its technicians.

" 'The distribution of yellow fever vaccine manufactured by the foundation in New York in 1941 was as follows:

United States Army	959,300	
United States Navy	960,000	
United States Public Health Service	3,000	
Panama Canal Zone	4,000	
Virgin Islands	12,000	
Total for United States government		1,938,300
West Africa	152,000	
South Africa	158,000	
East Africa	1,662,000	
Total for Africa		1,972,380
India		222,000
Brazil		100,000
Singapore		28,000
Grand total		4,260,680

"'In addition to these amounts the United States Army and Navy have asked the foundation to supply them with several million doses more during 1942. In all cases, both here and abroad, the vaccine is, of course, furnished without charge'."

SOME FACTS FOR THE *TIMES*

In a recent editorial, dramatically entitled "Medical Crisis," the New York *Times* paints a gloomy picture of the nation's health prospects. Taking a few exceptional communities as typical examples, it depicts physicians working the clock round, "heroically but helplessly," driving themselves "to the verge of collapse," and, most significant of all, "admitting that the quality of service rendered is poor and that it is getting worse."

No one will deny that the nation is threatened with a shortage of physicians for civilian purposes. This is an unavoidable product of the war and has nothing to do with our system of medical care. Not state medicine nor group cooperatives nor private practice can make two doctors out of one, or send a third of the nation's medical personnel into the armed forces without a resultant scarcity for civilian needs. This is another of the many hardships created by the war which we will have to bear patiently and palliate to the best of our ability by harder work and better distribution.

As one of several remedies, the *Times* proposes the development of a "national pool of doctors on which we can draw for both the armed forces and the civilian population." The idea is excellent — but hardly new.

Can it be that the *Times* has never heard of the Procurement and Assignment Service? Established at the suggestion of organized medicine prior to our entry into the war, this agency does exactly what the tains "a national pool" to which the armed services, industry, public health agencies, and inadequately supplied communities can apply for medical personnel.

Maybe if the scientific editor of the *Times* looked more closely at the facts, he would not have so many nightmares about medical care! The alarmist utterances on this subject which have been appearing recently in the *Times* do not conduce to high morale, either on the home front or in the armed forces.— *An editorial in the Journal of the Medical Society of the County of New York.*

TIME MARCHES ON

Once more the tramp of marching feet,
Once more the sound of shot and shell;
Once more a sign as we start to eat:
"Use Just One Lump and Stir Likell."

Victor Blake, *in the N. Y. Sun*

OPPORTUNIST

Librarian: "It's time for closing, sir. Is there anything you'd like to take out?"

Student: "Yes, there is. How about the blonde in the blue dress?"—*Rocky Mountain M. J.*

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MINIMIZE RISK OF INJURIES TO SOLDIERS' SPINES

A means of minimizing the risk of members of the armed forces sustaining injuries to the cartilage between the vertebrae of the lower part of the spine is suggested by J. Grafton Love, M. D., Rochester, Minn., in *War Medicine.*

A snugly fitting belt of the so-called sacroiliac variety or a snugly fitting canvas corset to support the backs, particularly of parachute troops, dive bombing pilots, those pilots whose duty necessitates their being catapulated from a ship and landing on an airplane carrier, and tank drivers, might serve to protect the vulnerable lower part of the back and prevent injuries to the intervertebral disk.

The condition of protruded intervertebral disk, with consequent compression of the spinal cord and spinal nerves, is occurring among the armed forces with a frequency sufficient to warrant special consideration. The pain from this condition is usually in the lower part of the back. At the time of injury to the disk, the victim may feel, or in rare cases even hear, a snap in the back. At times the victim even complains of loss of power in the lower extremities at the time of the onset of the protrusion, but more characteristically he has backache, and after a few days to a few weeks the pain extends down one sciatic nerve. The pain is usually accentuated by coughing, sneezing and straining at stool, and in about a fourth of the cases the pain is sufficiently severe at night to interfere with sleep. Treatment of protruded intervertebral disk is removal of the fragmented cartilage which is pressing on the nerve root or spinal cord.

"So you complain of finding sand in your soup?"

"Yes, sir."

"Did you join the Army to serve your country or complain about the soup?"

"To serve my country, sir — not to eat it."

—*The Highway Traveler*

Once Antigonus was told his son was ill, and he went to see him. At the door he met some young beauty. Going in, he sat down by the bed and took his son's pulse. "The fever," said Demetrius, "has just left me." "Oh, yes," replied the father, "I met it going out at the door."

—*Plutarch*

Illinois State Medical Society

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This list is corrected in accordance with the best information obtainable at the date of going to press. County Secretaries are requested to notify The Journal of any changes or errors.

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(Continued on page 48)

NEED OF COMPETENT MEDICAL TEACHERS

Pointing out that not everyone with an M. D. degree may serve as a competent teacher and that the latter are essential if medical schools are to meet satisfctorily the responsibilities they have assumed in connection with the graduation of more than twenty-one thousand qualified physicians during the next three years, *The Journal of the American Medical Association* for August 15 declares that medical teachers who are essential to the conduct of their school must appreciate their responsibility to continue in their teaching position. *The Journal* says.

"An educational institution is never better than its faculty. Regardless of physical and clinical facilities, a medical school cannot offer opportunities for a high standard of medical education without a competent faculty to assume leadership, offer stimulus and maintain supervision over the work of its students.

"As a war measure the medical schools of this country have increased the size of their entering classes by approximately 10 per cent. They have adopted an accelerated program which calls for the graduation of a class every nine months. They have been asked to make available for military service all members of their faculties except those who are absolutely essential for the conduct of their programs. The request is reasonable and is a contribution which the medical schools can and should make to the conduct of the war.

"The medical schools have been asked not to lower the standards of medical education in connection with the adoption of the accelerated program or the increase in size of the student body. Competent teachers are rare, and relatively few members of a medical school faculty, valuable as they may be in assisting in the conduct of the school's program, are competent to assume major teaching responsibilities. All too prevalent is the idea that a teacher does not need special qualifications and that in a medical school any one with an M. D. degree may serve as a competent teacher. Hence many apparently believe that any member of a medical school faculty who happens to be disqualified for military service either because of age or because of physical condition is competent to replace any other man in his department who is deemed essential by the school but who otherwise meets the qualifications for military duty. It is competent teachers that are essential, rather than simply manpower, if the medical schools are to meet satisfactorily the responsibilities they have assumed in connection with graduation of over twenty-one thousand qualified physicians during the next three years.

"Medical teachers who are essential to the conduct of the medical school must appreciate their responsibility to continue in their teaching positions. Furthermore, they should realize that by so doing they are making a great contribution to the war effort in the education of this unprecedented number of physicians, which is necessary to the continued conduct of the war. In many instances they will be called on to carry a much heavier routine and to make greater sacrifices as teachers than they would as commissioned officers in the military services. Enthusiasm for service, local attitudes and social pressure have already resulted in serious depletion of the medical school faculties in a few instances.

"Mutual cooperation between the Office of Procurement and Assignment of Physicians, Dentists and Veterinarians and the medical schools should provide a reasonable allocation of responsibilities for the faculties of the medical schools. Only through such cooperation can the medical schools meet both their immediate and their continuing responsibilities in providing their share of physicians for the entire war effort."

POINTS TO NEED OF SAFEGUARDING HEALTH OF MEDICAL STUDENTS

Journal Says Special Precautions Necessary Because Of War Time Need Of Completing Difficult Four Year Course In Three

With medical students being called on to complete a difficult four year course in three years because of the increased need for physicians brought about by the war, medical schools should do everything possible to protect the health of



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those students, not only in the interest of the students but also as a national duty, *The Journal of the American Medical Association* declares in its August 15 issue. *The Journal* says:

"The importance of health in wartime has justly been stressed not alone by public health officials but by all governmental agencies. Extensive programs have been developed to protect the health of those in the armed forces and in war industries. The physicians of our country have a tendency to neglect their own health; as a national duty they must now do everything possible to protect it so that the medical profession may serve during this period with the highest efficiency.

"Medical educators have for years been concerned because of the frequent 'physical breakdowns' among the medical students of this country. With the adoption of the accelerated program of medical education, students will be called on to accomplish in three years what previously has caused many breaks in health when spread over a period of four years. Thus it is especially appropriate at this time to emphasize that medical schools should do everything possible to protect the health of their students, not alone in the best interest of students themselves, but as a part of the responsibility which the medical schools are assuming in preparing these young men to serve efficiently as physicians either with the armed or with the civilian forces.

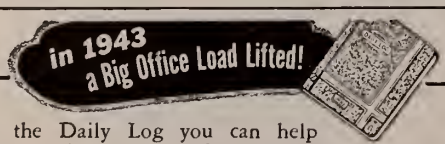
"Student health services in this country have been successful in discovering physical defects. The criticism is frequent that they do little to remedy such defects.

"Reports from army physicians suggest that a similar criticism may be applied to medical school health services. One army medical officer recently reported that 41 per cent of two hundred and forty-five third and fourth year students from five different medical schools were disqualified for army service because of remediable defects. Medical students have been permitted by the federal authorities to continue their education in order that they may enter the military services as qualified physicians. The medical schools have for the same reason sought the deferment of these students and have assumed the responsibility of preparing them for such service. The medical school and the medical student should cooperate to secure correction of remediable defects. Then as far as possible the graduates of our medical schools will be both physically and mentally qualified to meet their responsibilities."

BRIGHTER OUTLOOK FOR SUFFERERS FROM ALLERGY

While as yet there is no permanent cure for allergic conditions, recent experiments and clinical observations have done much to alleviate the suffering of many who are susceptible, Bret Ratner, M. D., New York, declares in *Hygeia, The Health Magazine.*

Discussing the symptoms of allergy, Dr. Ratner says that "People who have allergy manifest their symptoms in one or more of several ways. They may have hay fever, which produces symptoms referable to the nose and eyes. They may have asthma, which presents symptoms of suffocation due to a spasm of the muscles surrounding the air tubes or small bronchi. They may have eczema, a chronic skin condition which presents a great variety of lesions, or urticaria, more com-



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monly known as hives. A variety of gastro-intestinal disturbances may result from hypersensitiveness. . . . . Even migraine and temporary paralysis and blindness have been attributed to this malady.

"It may seem strange that such a wide variety of conditions should be included under the one disease entity, allergy. The explanation is rather simple, perhaps too simple to be complete, but our knowledge has not progressed beyond this point. The tissues which appear to become sensitized are the smooth muscle cells which make up the involuntary muscle found in the lung tubes, in the blood vessels of the skin, in the mucous membranes of the nose and eyes, and in the intestinal tract. The symptoms a patient presents, therefore, will depend on the smooth muscle or tissue sensitized. . . . ."

It cannot be definitely stated, Dr. Ratner explains, whether all or only certan persons are subject to sensitization. "Certain investigators," he says, "believe that heredity plays a major role. It is granted that human beings possess certain constitutional characteristics that may play a role in the ease with which allergy is acquired, but, so far, these characteristics are not known. Children without any family history may develop allergy, and parents suffering from allergy may produce normal offspring. . . . ." It has been granted that while a particular allergic manifestation is not heritable, the capacity to become sensitized is. The child of an asthmatic parent may not necessarily have asthma, but he may have hay fever or eczema.

"The belief has been expressed that allergy is acquired in much the same way as infectious diseases. There may be certain constitutional

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factors which make one person more susceptible than another. There are, moreover, conditions which render tissues more susceptible to the invasion of and sensitization to foreign proteins. It is known that membranes are highly permeable in early infancy; this is a period when the organism is being introduced to all new foods and other environmental substances. Another period of danger is during convalescence from disease. . . ."

The treatment is at times as dramatic as the disease itself, the author observes, and quite often one who is sensitive will be free of all symptoms through the simple expedient of removing the offending substance. The treatment of food sensitivity consists of a meticulous removal from the diet of all foods that contain the offending substance. Once the offending food is discovered and eliminated from the diet, a tolerance can be built up by giving the food involved in small amounts, which are gradually increased.

"A remarkable physicochemical fact," he says, "is that food which is harmful in a raw state may be tolerated when it is thoroughly cooked. Thus a person sensitive to egg may react to a coddled egg as well as to a raw one, yet he may be able to eat a hard boiled egg. The milk-sensitive patient can tolerate milk boiled for half an hour, or evaporated milk, and the person who is allergic to wheat, meat, or vegetables in like manner can tolerate these foods when thoroughly cooked.

"Doctors are endeavoring to establish an immunity, or tolerance, to pollens by inoculating hay fever patients at regular intervals throughout the year."

TAIN'T CRICKET

"November 7th. Comes via Chamberlain the tale of the patient so earnestly sold by Bill Arnold's allergic survey which showed her sensitive to eggs that she returned the hen the grocer sent asking for a rooster instead."—*Random Thoughts of the Secretary, The Journal of the Arkansas Medical Society.*

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Nutritionists have long insisted upon informative labeling of food products. Here's an example of the nth degree of informative labeling displayed in a restaurant: "Hard boiled egg — 1 cent; wear and tear on chicken — 3 cents; rooster's fee — 1 cent; total cost — 5 cents."—*Credit Lines, Am. Pub. Health.*

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TELLS HOW TO PROTECT A CHILD BORN INTO AN ALLERGIC FAMILY

Physician Says That With Proper Planning In Infancy And Childhood Much Suffering And Disability May Be Prevented

With proper planning in infancy and childhood, those born into allergic families may be saved much suffering, and the disabilities caused by manifestations of allergic sensitivity may be largely prevented, Herbert F. Jackson, M.D., New York, declares in *Hygeia, The Health Magazine* for October.

"In an effort to prevent allergy, one should start if possible before the baby is born," he advises. "The expectant mother should avoid excessive intake of any one type of food, and particularly of those foods, such as eggs, nuts and chocolate, which are most frequently the source of trouble.

"It is not uncommon to find a new born baby of an allergic family extremely sensitive to foods which it has never eaten. A skin test with egg, for example, may show a marked local reaction; this must be construed as indicating that the mother has sensitized her offspring by the eggs which she has eaten. That this can happen has been proved by animal experimentation. Often an expectant mother has cravings for some particular food and may indulge in it excessively. This practice is dangerous from an allergic standpoint, since in that manner she may be making the unborn baby sensitive to the food. A well balanced diet for the pregnant woman is always important, whether she is allergic or not."

After birth, if the mother is able to nurse the baby it becomes extremely important that she eat correctly and avoid foods which were known to be a source of trouble or which she has found associated with some upset to her in the past. If the mother is unable to nurse the baby, the selection of an artificial food for the baby must take into consideration its allergic tendency. As a rule, the physician explains, foods that are heated are much less likely to cause allergic reactions than unheated ones. Cooked milk and cooked cereals are less likely to cause eczema in infants. Milks that have been subjected to high heat, as is the case with evaporated milk, are always preferable to fresh cow's milk.

"Additional food should be carefully selected as the baby grows older," Dr. Jackson says. "An infant with a background of allergy should not be offered egg until much later than a normal infant. Only a small portion of the yolk of the egg should be tried at first; the amount may be gradually increased if there are no symptoms. . . . An infant should never be forced to eat. It has been demonstrated in many instances that food for which a child shows a strong distaste may disagree with him and cause allergic reactions. . . .

"In the care of an infant in a known allergic family, close attention must be given to the nursery. The room should be as near dust free as possible. . . . All wool hangings, rugs or carpets should be avoided. The floor covering should be of material which is easily washed, such as linoleum — with a cotton rug if desired. . . .

"A hair mattress should not be used, since many allergic patients are extremely sensitive to the emanations from hair. . . . Even cotton or kapok may sometimes give trouble, but this is so unusual that these substances may usually be used with safety. . . . Infants do not use pillows, but an older child should have only cotton or kapok, and these should be renewed fairly often. . . . Furniture which is dust-collecting should be avoided throughout the home. . . . With a strong history of asthma in the family, it would be desirable — if it is economically possible — to have only filtered, dust free air in the nursery.

"The baby's clothing should also receive attention. Silk or wool should not be used; both these materials have been the source of allergic rashes in susceptible infants. Cotton garments are preferable. . . ."

Dr. Jackson warns that children of allergic tendency should not be dosed with home remedies, since many drugs may cause a disturbing and painful skin reaction in a susceptible child. There is particular danger in using patent medicines, he points out, because they contain numerous ingredients, any one of which may produce alarming symptoms.

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"Let the consequences be what they will, I am eareless. No man can suffer too much, and no man can fall too soon, if he suffer, or if he fall, in the defense of the liberties and constitution of his eountry."

This was said sineerely by a true American many years ago — Daniel Webster. He could add little more to his words today, were he alive — nor eould he have left for our thoughts any greater pledge for the free man in a demoeracy. *N. Y. State J. M.* —7-15-42

SCIENCE IN 1941

The ten big science stories and achievements of 1941, selected by Watson Davis, director of Science Service, are:

1. The radio locator of attacking airplanes developed and put into war use.

2. The enrichment of white flour and bread with vitamins and minerals.

3. The "cure" of gray hair in humans by daily doses of one of the B vitamins, para-aminobenzoic acid.

4. The great aurora of Sept. 18.

5. The production of more and larger airplanes for war use.

6. The development of sulfadiazine spray treatment of burns.

7. Evidence that fowls constitute a reservoir for encephalitis or sleeping sickness and that mosquitoes carry the virus.

8. Evidence that infantile paralysis may be spread by flies.

9. Production of magnesium for airplanes by "mining" sea water.

10. Development and construction of a new type of cargo ship, Sea Otter II, welded and powered with auto engines.

GONORRHEA IN THE FEMALE

R. Deakin and D. R. Smith, of St. Louis (*Jour. Michigan Med. Soc.* 40:440, 1941), says that before sulfathiazole treatment was instituted at the St. Louis Maternity Hospital, every woman admitted to the wards for delivery who had gonorrhea developed an acute postpartum gonococcal salpingitis about ten days after delivery, although most of these women had been under careful observation and treatment for some months previously in the outpatient department. With the advent of sulfathiazole, fifty such cases of female gonorrhea have been rendered noninfectious with a single course of therapy consisting of twenty grams of sulfathiazole, four grams a day. No other therapy, oral or local, has been used. Each patient returns once a week for three weeks for smears and cultures from urethra and cervix. If negative reports are obtained, she returns for the same procedure once a month for three months and is then discharged. One of the greatest advantages of sulfonamide therapy in gonorrhea is the abandonment of local treatment with its many possibilities for harm, both in the male and in the female. Sulfathiazole renders the majority of cases of chronic pelvic inflammation noninfectious. Since gonorrhea is a self-limited disease, overtreatment sometimes nullifies nature's efforts to effect a cure. It is probable that the number of sulfonamide-resistant cases of female gonorrhea will increase as time goes on. Unauthorized self medication and improper therapy have already presented a difficult problem in male gonorrhea. Sulfathiazole therapy should not be continued more than five days, and should not be repeated in the event of relapse.—Medical Record, Sept. '42.

Social & Educational Adjustment

for exceptional children of all ages. Visit the school noted for its work in educational development and fitting such children for more normal living. Beautiful grounds. Home atmosphere. Separate buildings for boys and girls. Get catalogue.

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"A strong, healthy body needs a strong, healthy mind to tell it what to do. Morale may be thought of as a controlled state of mind, which gives man courage and endurance in danger — in other words, emotional stability.

"The emotionally mature person is calm, well poised, able to face disagreeable facts and hardships. He can take responsibility, accept blame, criticism, and praise casually. He is not too concerned with his own importance. He learns to conserve his time for rest as well as for work. He is not easily irritated, angered, frightened, or thrown into panic. Even under stress, he is able to think clearly and reason well.

"Yet intelligent, well-educated individuals are sometimes emotionally immature. They are easily upset by trifling annoyances or unpleasant facts, being governed by feelings and emotions rather than by reason and intellect.

"How petty complaints about rationing appear, for example, in the light of what our boys are now facing in the field and at sea!

"Good mental hygiene means training emotions as well as intellect. Instincts, emotions, feelings are ever present and ready to supplant intellect in determining conduct and behavior.

"Good mental hygiene means the preservation and betterment of mental health, which goes hand-in-hand with physical fitness. Every individual should build and maintain himself in the best possible physical health by diet, exercise, rest, and relaxation.

"Excessive fatigue must be avoided. Energy is often wasted in useless activity. Use of time should be well planned. The man rested will do more and better work. Those who suffer from fatigue are apt to be unstable, irritable, pessimistic, gloomy, and sometimes forgetful, to say nothing of their increased susceptibility to disease.

"Emotional control is best taught by example, the example parents set their children, the example leaders set their people. Intellect, combined with emotional balance, gives confidence, courage, and stability.

"We must remember the enemy used in France the technic of things to come and rumors of impending disaster. They spread purposely a feeling of great anxiety.

"When we hear wild rumors and destructive criticism of our government we must learn to stop, look, and think. We should challenge the rumor instead of repeating it. Such rumors repeated and disseminated tend to disunite us and are helpful to the enemy.

"Shared hardship, danger, privation, unite a people, strengthen them. Activity and serving build up good mental hygiene. Self-control is increased by helping others.

"During times of stress the person who has a definite duty to perform is psychologically better off than one who is idle.

"In my opinion there is no greater force for the maintenance of morale and emotional stability than abiding faith in God. A stronger grip on eternal values will help to usher in a brighter and more just age."—F. Ross Haviland, M.D., of The National Committee on Mental Hygiene, in an address before the Onondaga County Medical Society.

N. Y. State J. M.—9-15-42

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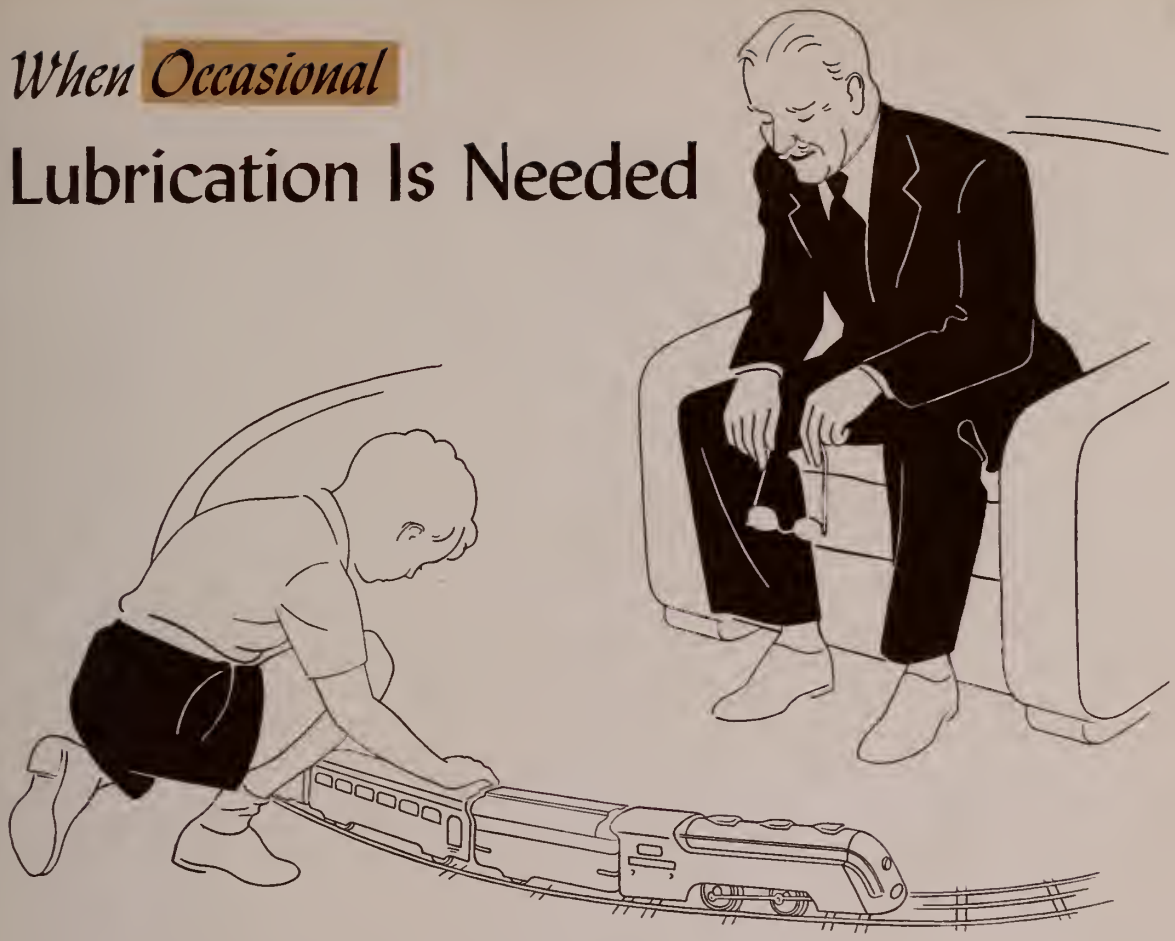
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November, 1942

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The Treatment of Surgical Shock

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†Archives of Physical Therapy, 21, 12 (Jan.) 1940 *Reg. U. S. Pat. Off.

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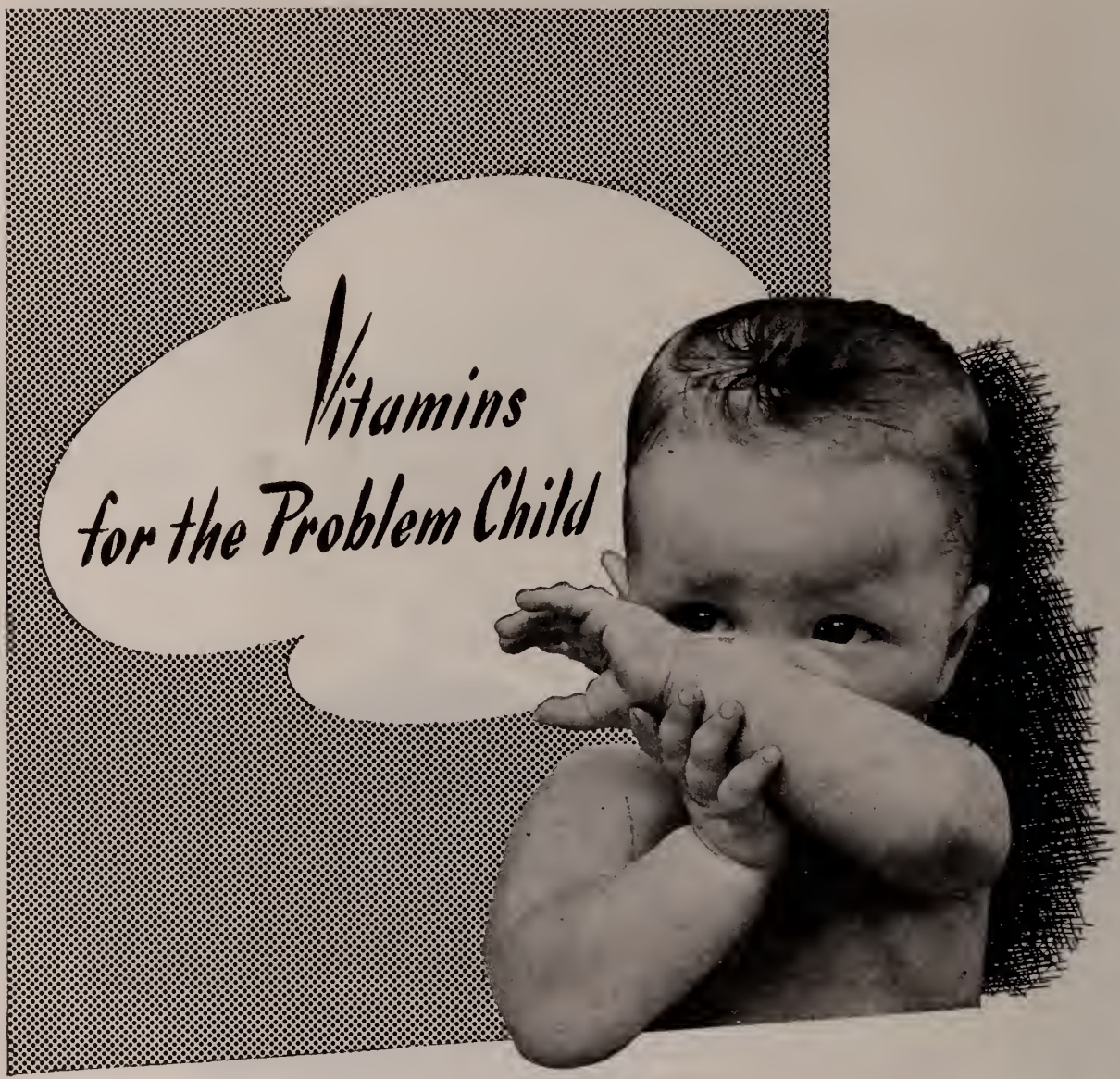


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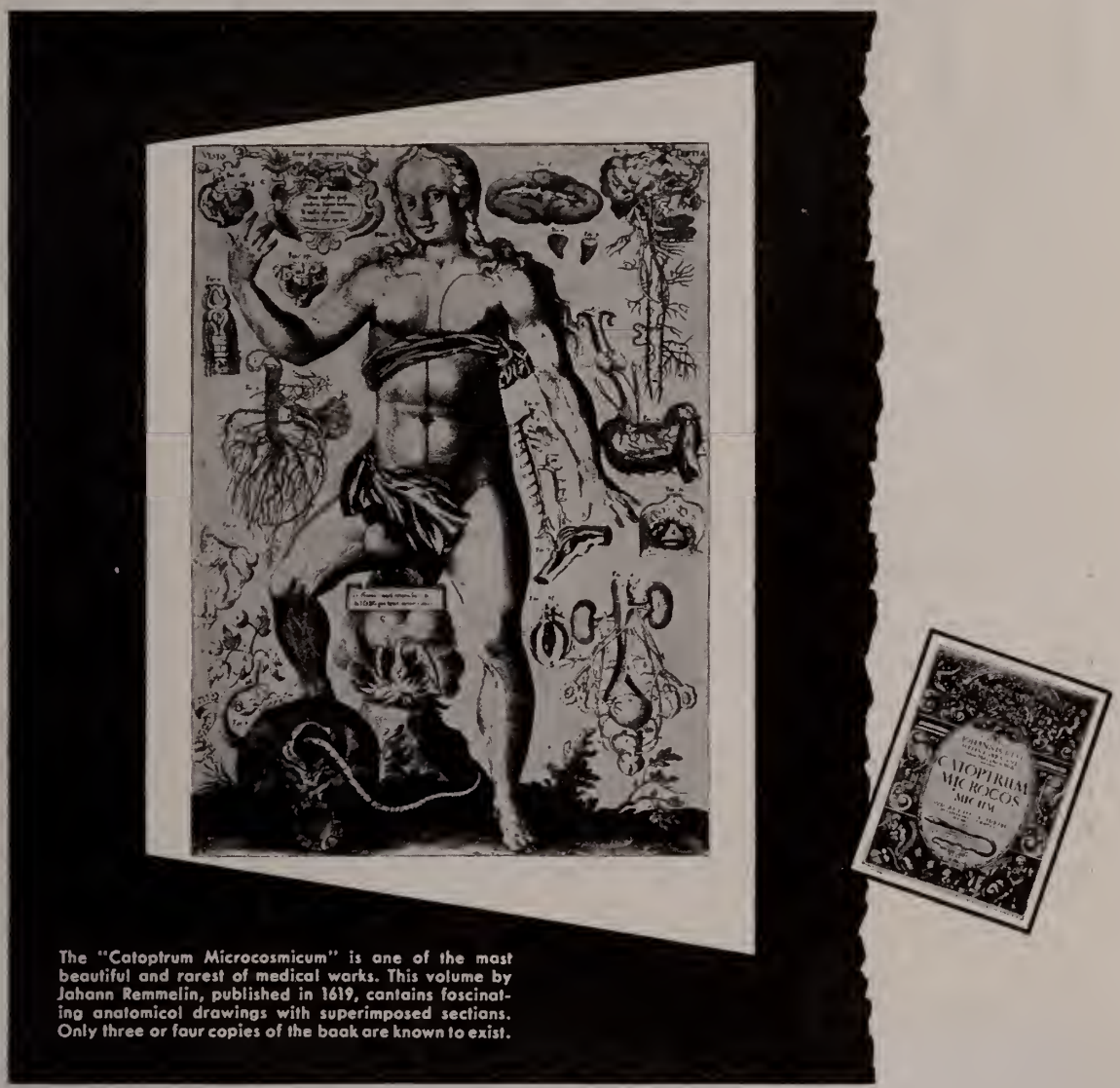
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REFERENCES:

1. Snyder, R. G.; Squires, W. H.; Forster, J. W.; Traeger, C. H. and Wagner, L. C.: The Treatment of Two Hundred Cases of Chronic Arthritis with Electrically Activated Vaporized Sterol (*Ertron*), Indust. Med., *11*, 295 (July) 1942.

2. Steck, I. E.: Further Clinical Experience in the Treatment of Arthritis with Vitamin D, Ohio State M. J., *38*, 410 (May) 1942.

3. Snyder R. G. and Squires, W. H.: Follow-Up Study of Arthritic Patients Treated with Activated Vaporized Sterol, New York State Jr. Med., *41*, 2332 (Dec. 1) 1941.

4. Farley, R. T.; Spierling, H. F. and Kraines, S. H.: A Five-Year Study of Arthritic Patients: Laboratory and Clinical Observations in a Series of Cases Treated with Activated Vaporized Sterol Whittier Process (*Ertron*), Indust. Med., *10*, 341 (August) 1941.

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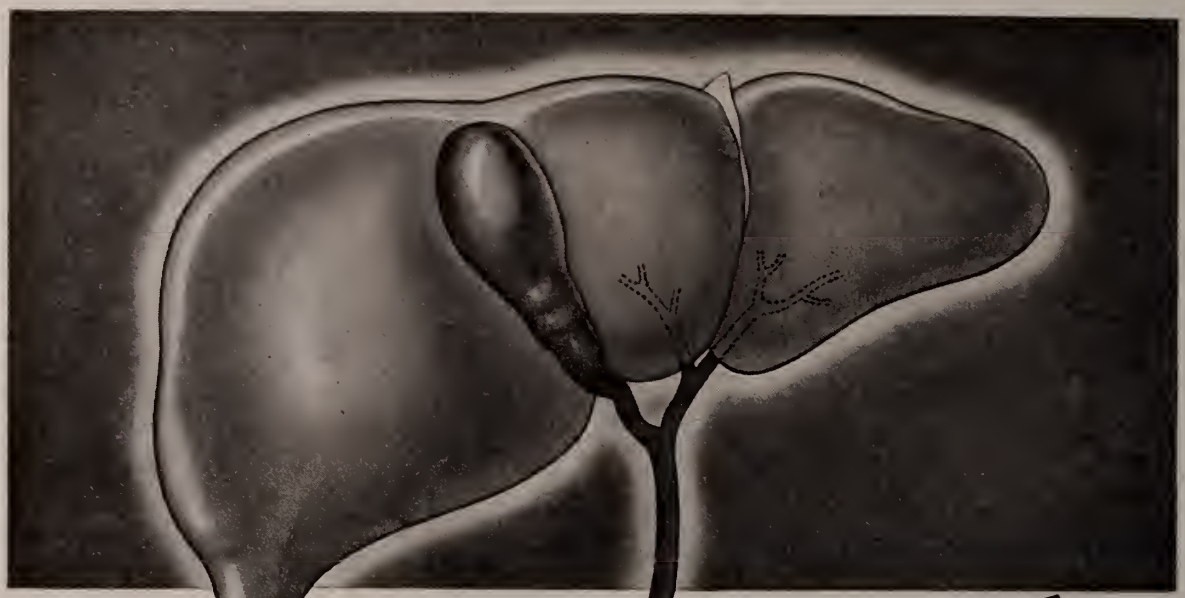
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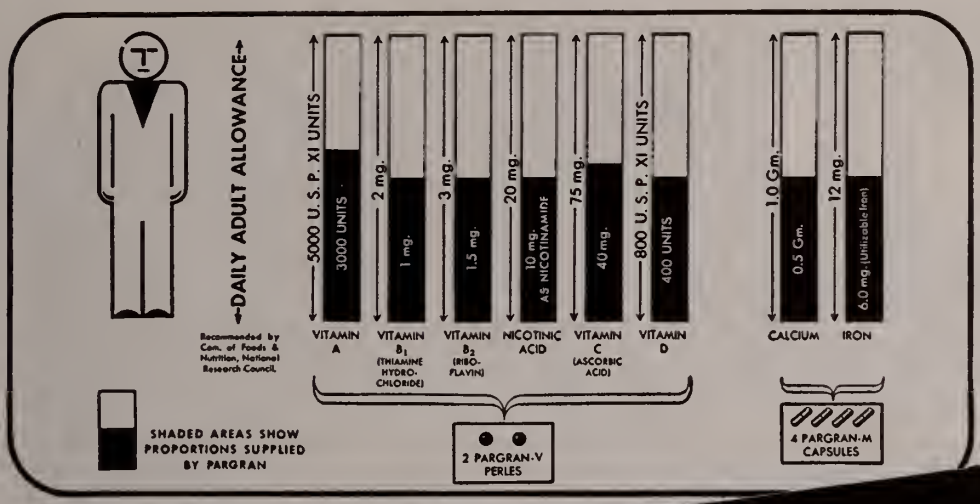
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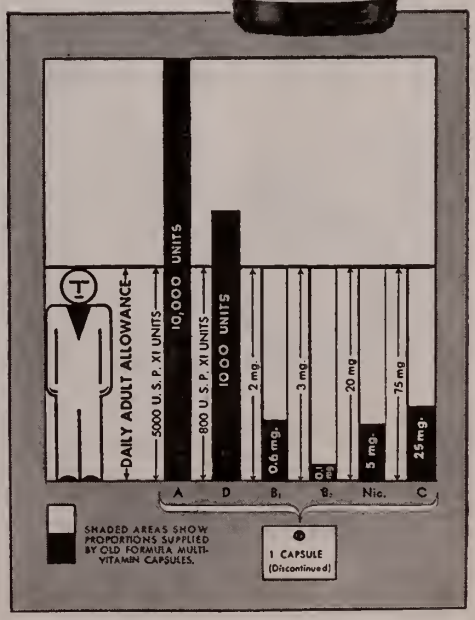
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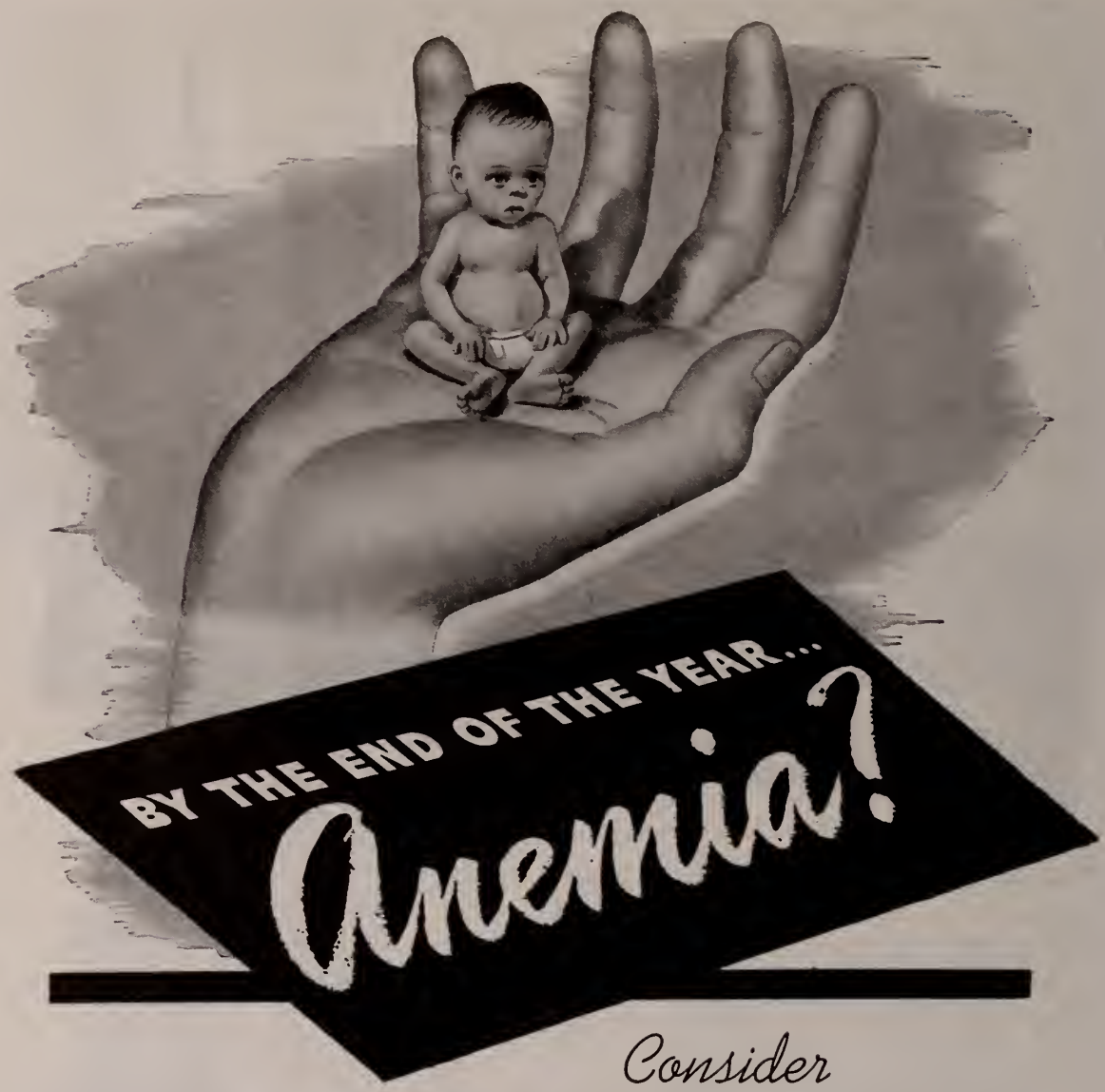
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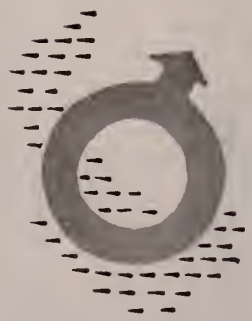
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1. Maurer, S., Greengard, J., and Kluver, C.: "The Value of Liver Extract and Iron in the Anemia of Young Infants." J.A.M.A. 98:1069:1932.

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[1] *Fauley, G. B.; Freeman, S.; Ivy, A. C.; Atkinson, A. J., and Wigo H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch Med. 67: 563-578 (March) 1941.*

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Lam[2] has also observed Heparin to be clinically useful in post-operative infarction. Recently Priestley and Barker[3] have reviewed 1665 cases of several types of thrombosis or embolism, of which 897 cases were pulmonary embolism. The authors concluded that the proper use of Heparin in post-operative pulmonary embolism will prove life-saving in a substantial number of cases.

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[1] KEYES, J. W., and SHAFFER, C. F.: J. A. M. A. 119:882 (July 11) 1942.
[2] LAM, C. R.: West Va. M. J. 38:215 (June) 1942.
[3] PRIESTLEY, J. T., and BARKER, N. W.: Surg., Gynec. & Obst. 75:193 (Aug.) 1942.

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The common cold is likewise of little importance in itself. Nearly everyone has experienced its debilitating but transient effects, and it is generally regarded as little more than a nuisance.

Nevertheless, accurate, nationwide surveys, conducted last winter, show that *one-half of all worktime lost in War Industries as a result of illness is lost because of the common cold*,[1] and, during a single four-week period, colds removed about 1,600,000 man-days of work from our industrial war effort alone.[2]

The situation with regard to the nation as a whole is described by the report that 23,000,000 persons in the United States had colds during the week ending February 24, 1942.[1]

1. Gallup, G.: American Institute of Public Opinion Survey, March 1, 1942
2. Gallup, G.: American Institute of Public Opinion Survey, Dec. 29, 1941

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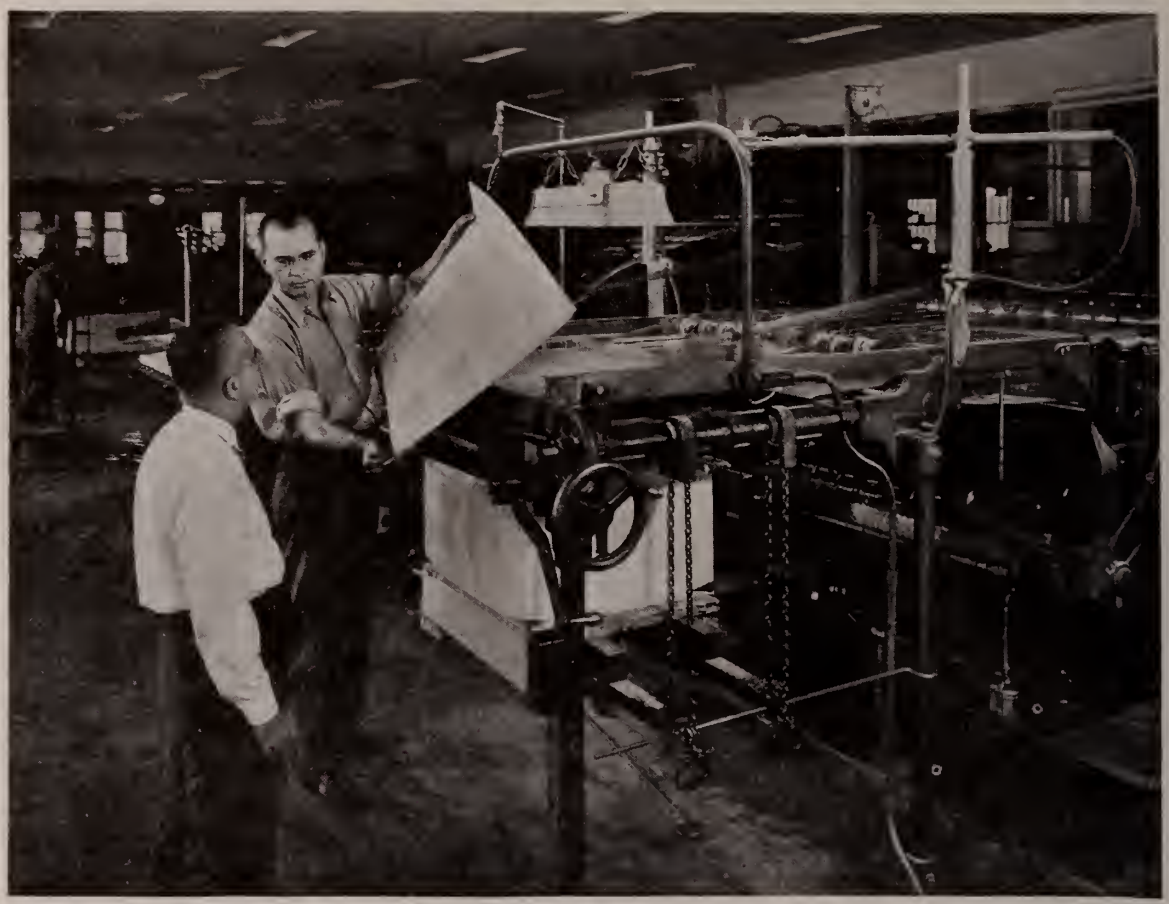
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November, 1942
VOL. 82, NO. 5

The Illinois Medical Journal

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

PROCUREMENT AND ASSIGNMENT SERVICE

The Second Year?

During the past year the Procurement and Assignment Service for Physicians, Dentists and Veterinarians has aided materially in the procurement of these professional men for the armed forces. The problem has been more complicated naturally in the states with the larger populations such as New York, Pennsylvania, Illinois, California, Massachusetts, Ohio, and several others.

The problem has been more complex in Illinois by virtue of the many types of industries, agricultural areas, the many large hospitals, ordnance plants, mining and oil industries, and the fact that this state has five medical schools, four of which are recognized as Class A schools which must retain many instructors in draft age as essential in their present position.

According to the 1942 A. M. A. Medical Directory, Illinois, with a population of 7,897, 342, has 12,542 physicians residing within the state. Chicago with a population of 3,396,808 has 7,-183 physicians, and there are approximately 675 physicians residing in Cook County outside the city of Chicago, making a total for Cook County of more than 7,900 physicians. All of the medical schools and the majority of the large hospitals are located in Cook County.

Each of the large hospitals with many internes, residents, and staff members holding full time or other responsible positions, has requested that many of these men be retained for the successful operation of the institution. Procurement and Assignment has endeavored throughout the country to "streamline" the lists of essential physicians in these many institutions. It seems quite probable that during the war nearly all of them can operate successfully with fewer internes, residents, and essential staff members.

Illinois also has approximately 700 women physicians who are not at this time available for military service, although they are most useful in other essential capacities in the practice of medicine.

There are quite a number of Illinois counties which prior to the war, had merely enough physicians to care for the civilian groups. With the added burdens since Pearl Harbor, resulting from an increase in industrial workers and the creation of many defense zones throughout the state, some of these counties do not have enough physicians to meet the present minimum requirement of one for each 1,500 population. One Illinois county with a population of 24,000 has eight physicians, three of whom are capable of giving limited service only. Consequently the five physically fit physicians must be retained for the present at least, for civilian needs.

Illinois has many small towns with only one physician, and in many instances these men must be declared essential. In some smaller cities with perhaps two or three physicians who in-

dividually should be considered as available for military service, it has been the policy to make the younger man available and the elder ones essential until replacements can be made by relocating a physician who has been disqualified for physical disabilities or by some physician who is above the present draft age and is willing to be relocated.

Our Illinois survey shows that there are approximately 5,638 physicians under the age of 45 in this state, including all men who must be retained for the present as essential. With the large number of men required from Illinois as its quota by the end of 1942 it is quite obvious that the majority of physicians under 45 who are physically fit, will be expected to apply for a commission before the end of the present year.

When the Illinois quota has been met the Procurement and Assignment Service will no doubt be expected to aid in every way possible in the relocating of physicians from communities which have an ample supply to those communities where the supply is definitely inadequate.

With the ever increasing number of essential industries ordnance plants and other essential services in this state, many physicians will be expected to increase their interest in industrial medicine and surgery. Already there are a number of places where physicians who can qualify for this important line of work are needed, and the Procurement and Assignment Service for Illinois will aid in relocating these men after the desired investigation has been made. Preference will be given to those physicians who have been physically disqualified for service and those who are above the draft age.

Physicians who are willing to be relocated or who have had special training in industrial work may fill out the form to be found in the section of this Journal, "Medicine's Role in the War Effort," and send it to the State Chairman for Procurement and Assignment and they will receive additional information promptly.

The list of localities where physicians are

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needed is increasing each week, and efforts have been made to supply these needs as rapidly as possible. In the near future it seems quite probable that more communities needing physicians will be listed and information will be made available to those physicians desiring to serve their country in this important work.

Although an accurate list of physicians who have received commissions for military service is not as yet available, we hope in the near future to publish their names in the Illinois Medical Journal. At this time we know that in most downstate counties there are but few physicians remaining who are available. In at least two counties, McLean and Morgan, the maximum number of physicians who have been declared available have either received their commissions or have been examined and found physically disqualified. This is true in many smaller counties with only a few physicians located therein, and even though the total number now in service is not as great as in other counties, in proportion to the number actually available, the desired number has been commissioned.

It has been stated repeatedly that eight states are expected to furnish approximately 80% of the total number of physicians desired in the services of the government, and this means in each of these states the quota must be high, but it should, and no doubt will be met.

Once more the physicians of Illinois have responded well to the urgent request of the government for physicians to join the armed forces and this likewise is true for the country as a whole. Physicians have always had an important function in all wars in the history of the United States and in this greatest of all wars with approximately 80% of the nations of the world involved, the demand is greater than ever before.

RE-LOCATION OF PHYSICIANS

The recent survey made by the Procurement and Assignment Service has shown that in certain communities in Illinois there are still more physicians than seem necessary for adequate civilian care, while in other sections of the state there is an inadequate supply. The early surveys made to determine the medical man power in Illinois elicited some rather startling information as there were counties with only one physician for 2,500 or 3,000 inhabitants.

With the large number of Illinois physicians entering military service, there are many communities now needing additional physicians. An effort is being made to procure physicians for these areas. Many physicians who have been disqualified for military service have given the assurance that they are willing to be re-located for the duration of the emergency. In a number of instances some of the communities needing physicians have already been supplied.

Illinois, with its many industrial plants now doing war work, has had many physicians in responsible positions to care for essential workers in case of accidents, the development of industrial dermatoses, or other medical conditions found among such workers. It has not been possible to declare all of these men as essential, and consequently many plants are now asking for qualified men to carry on this work.

The Procurement and Assignment Service has listed a number of these plants or industrial organizations desiring additional medical personnel and at this time quite a few of these requests have been cared for.

In a number of Illinois communities there are two or more physicians where one of them could be released to locate in defense areas or in other communities needing physicians. With the ever increasing number of essential plants, ordnance and otherwise, the surrounding areas are increasing their population rapidly, and perhaps under normal conditions there were sufficient physicians to care for all civilian needs, yet with the mushroom growth as a result of unusual activities, additional physicians are now needed.

Efforts have been made throughout the state to ascertain these needs and also to list those physicians willing to do their bit in this present emergency by entering practice in a new community where services are now more in demand than in his present location.

With these facts in mind it is hoped that physicians willing to be relocated will submit the information as soon as possible to Dr. Harold M. Camp, Chairman for Illinois, Procurement and Assignment Service, Monmouth, Il-

linois. The information desired is as follows:*

Name .....Age..Present Location.....
School of Graduation .....Date.....
Do you desire to conduct: (1) General practice..
(2) Specialty .....
Have you had special training or experience in industrial medicine or surgery? .....
Would you be interested in a position with an essential industry or at an ordnance plant?
What is your own present physical condition? (State whether or not you have any physical impairment which might affect your ability to carry on routine work) .....

When this information is received the letter will be answered promptly and following verification of the information submitted by state Committee on Procurement and Assignment, a list of communities needing physicians, or of industrial plants will be referred to the inquirer.

IMPORTANCE OF GENERAL PRACTITIONER

The general practitioner is again taking his rightful place in the practice of medicine — and with a background of study and training that justifies the highest confidence in his ability, John Joseph Nutt, M.D., New York, declares in *Hygeia, The Health Magazine* for November, asserting that "If specialists would accept no patients except those referred by family physicians it would benefit the patient, the family physician and the specialist.

"The patient would, of necessity, have a physician who would be friend and adviser in all things pertaining to health. The prevention of illness has become a large part of the practice of medicine, and surely this is work for the family physician, who knows his patient from top to toe. He also should be the judge of the good or evil treatments, drugs, foods, exercise and climates. . . . No matter where he lives, the most recent advances in science are available to the family doctor through medical journals, circulating medical libraries and medical societies. By consulting him in small matters his patients may often avoid serious consequences. . . . The specialist would not be called on to treat conditions which the family physician can treat exactly as well; he would be consulted only for those conditions which come within his special field. The final result would be the thinning out of the ranks of the specialists — only the really fit surviving — and the return of the family physician to his own. . . ."

*See form on page 340.

DISEASES CAUSED BY A FUNGUS MAY BE AMENABLE TO SULFONAMIDE TREATMENT

Another large and serious group of diseases, the mycoses (diseases caused by a fungus), may be amenable to sulfonamide treatment, Mark Marshall, M.D., and R. Wallace Teed, M.D., Ann Arbor, Mich., say in *The Journal of the American Medical Association* for October 17 in a preliminary report on the recovery of a child from Torula histolytica meningoencephalitis (inflammation of the brain and the membrane enveloping it due to infection with Torula, a fungus or mold belonging to the yeast family). Sulfadiazine was the treatment agent.

"Human infection with the various pathogenic (disease causing) yeasts," they explain, "is not of frequent occurrence. This is particularly true of torulosis, which must be classed as an extremely rare disease. When it is considered that the torulae are found on normal skin, in the human throat and gastrointestinal tract, in milk, on various plants and in the bodies of many insects . . . it is surprising that infection does not occur more often. When it has occurred, however, it has usually been fatal. . . ."

They say that "The absence of torulae in the spinal fluid (of the girl whose case they report) since about February 1 (sulfadiazine treatment was started January 13) along with clinical recovery, leads us to the hope that the child may be completely cured. . . ."

In addition to their own experience the two physicians cite several reports by others of "evidence that mycotic infections as a class may be treated successfully by the sulfonamides. . . . It is therefore evident that another large and serious group of diseases, the mycoses, may be amenable to sulfonamide therapy. One has a distinct feeling that the high mortality of the past will give way to a much better experience in the near future."

Correspondence

OFFICE OF WAR INFORMATION
WAR MANPOWER COMMISSION

The Directing Board of the Procurement and Assignment Service is pleased to announce that 95 percent of the 1942 procurement objective of medical officers for the armed forces has already been met. Toward this total a number of States have supplied more than their share of physicians and only a few States are lagging behind in their quotas. It is from these States that the additional physicians needed during the current year should come.

The recruitment of such a large number of physicians in a few months is a remarkable achievement and another demonstration of the traditional patriotism and unselfishness of the medical profession. In this achievement, and particularly in those of its members who are "in service," the profession can justifiably take pride.

The end, of course, is not yet. Increases in the armed forces will necessitate more medical officers and additional demands will be made upon the profession for medical services in critical war production areas. The Directing Board is convinced, however, that the physicians of this country will respond to future calls for service, whatever they may be, in the same splendid manner with which they have already volunteered for service with the armed forces."

/s/ Frank H. Lahey, M. D.
Harold S. Diehl, M. D.
Harvey B. Stone, M. D.
James E. Paullin, M. D.
C. Willard Camalier, D. D. S.
of the Directing Board

WOMAN'S AUXILIARY NOTES
HENRY COUNTY AUXILIARY

On October 8th the Henry County Auxiliary held its Annual Public Relations Day.

Mrs. C. P. White, president, opened the meeting, introducing Mrs. W. J. Wanninger, State President of the Woman's Auxiliary, Dr. C. P. White, President of the Kewanee Board of Health, Dr. H. L. Pettitt, who said a few words concerning the topic of the day.

The Public Relations Chairman, Mrs. J. T. Boswell then introduced Dr. E. A. Piszczek, president of the Cook County Board of Health and Miss Mary Eagan of the Staff of the National Foundation for Infantile Paralysis who gave a very interesting demonstration of the Sister Kenny treatment for infantile paralysis. The patient was Miss Joan Weeks, a local polio victim who had been treated by the Sister Kenny method.

The program was intensely interesting. There were about 300 guests, including doctors and nurses who seemed spellbound every moment of the demonstration. Henry County Auxiliary feels that its Public Relation Day was a great success and wishes to thank the local and State Boards of Health for their cooperation.

Mrs. D. E. Meier
Sec'y. Pro-tem, Henry Co. Aux.

AMERICAN COLLEGE OF SURGEONS CANCELS CLINICAL CONGRESS

The annual Clinical Congress of the American College of Surgeons which was scheduled to be held in Cleveland November 17-20, 1942, was cancelled by the Board of Regents of the

College at a meeting held in Chicago, Wednesday morning, October 14. Motivated primarily by patriotism, the Regents were influenced by the present conditions surrounding the general war program which have led to a greater burden on the members of the surgical profession in their local communities as a result of the large proportion of the profession which is serving with the armed forces. The Regents by this action took cognizance of the desire of the profession to do nothing which would interfere with the successful prosecution of the war program such as would be caused by temporary absence of its members from civilian duties during the period of the Congress, embarrassment of the transportation system, and interference with the work of the local profession in Cleveland in preparations and presentations incident to such a meeting.

THEY'D NEVER GET INTO OUR ARMY

To parallel the policy of the War Department not to admit to the army any one unable to pass a rigid physical examination or whose age is over sixty, the following men should have been either at once discharged or not accepted for service by their respective governments.

Moses—Over age, eighty when he took command.
Saul—Insane.
Alexander—Inebriety and temper.
Charlemagne—Over age in last campaign.
Mohammed—Catalepsy.
Djengis Khan—Paranoia.
Richard III—Hunchback.
William of Orange—Chronic asthma, "an asthmatic skeleton."
Oliver Cromwell—Precancer of skin.
Charles II—Tuberculosis.
Frederick the Great—Kyphosis and suicide obsession.
Duke of Wellington—Under weight.
Marshall Blucher—Over age, was 73 at Waterloo.
Julius Caesar—Epilepsy.
Napoleon Bonaparte—Chonic stomach ulcer and under size.
George Washington—No opposing molars.
Columbus—Over age last voyages.
Lord Cleve—Mental instability, suicide complex.
Garabaldi—Over age in Franco-Prussian war.
General Shafter—Over weight and unable to ride a horse.
Ulysses S. Grant—Inebriety, once forced to resign for same.
W. T. Sherman—Nervous, thought insane by some.
Mike Lawler—Over weight, hero of assault at Vicksburg.
Stonewall Jackson—Paralysis of hand from gun shot.
General Hancock—Gun shot of leg, later amputated.
Philip Kearney—Lost arm in Mexican war—in Civil War.
Benjamin Butler—Nearly blind in one eye.
Kaiser William—Birth palsy and atrophy one arm.
Sergt. York—Conscientious objector.
Joseph Wheeler—Over age at Spanish-American war.
Abraham Lincoln—Disproportion of weight and height.
Horatio Nelson—Loss of one arm and an eye.
—R. Cadwallader in *Journal of the American Medical Association.*

ROWING METHOD OF ARTIFICIAL RESPIRATION

With the patient supine, place yourself at the patient's head. Grasp the patient's arms at the wrists and firmly extend his arms above his head, to raise the chest, keeping them there long enough for air to enter the chest; then rapidly drop the arms back towards patient's chest leaving them there long enough for air to rush out of the chest. Repeat this rowing motion 10 to 12 times per minute.

The arms act as levers, the weight being lifted that of the chest suspended through the pectoralis major and minor and subclavius muscles. The weight of the anterior chest returning to rest causes the expiratory phase. There is no pressure brought to bear upon the body and hence no chance for trauma. The method is adaptable wherever artificial respiration is necessary. It permits convenient observation and care of the patient and results in a maximum amount of aeration. One operator has been able to carry on the rowing method for 2 hours with perfect ease.—*M. C. Rosekrans, M.D., Journal-Lancet, October, 61:421, 1941*

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

I am very glad of this opportunity to discuss with you the problem of Medical Economics. I believe it a problem that requires intelligent study and that conclusions should not be drawn by either the profession or the public until facts are available and ascertained, because no problem can be justly or lastingly settled only on the basis of existing facts. First we must admit that a medical economic problem exists and that problem effects 140,000 doctors and 120,000,000 people, approximately, in the United States, living in different territories, under different social and economic conditions and, therefore, requiring different plans of study for various groups and locations.

We are undergoing a world-wide change in our political, social and economic status. Whether these changes are going to result in a further evolution of the political, social and economic rights of men, or in a fall or deterioration, I will not attempt to discuss here, suffice it to say that since the introduction of philosophy, the Hebraic faith, the reformation, the Renaissance, the French Revolution and the founding of the democracy of the United States, that the religion, educational, social, political and economic rights of men have undergone an almost steady process of evolution. There have been some minor detours and perhaps we are only on a detour now and will soon be back on the main highway in all of these developments.

I speak of this because we are now discussing the economic problem of the common man, or so-called "middle class," which constitutes about eighty per cent of our population. Perhaps you, as outstanding men of your community, are not interested in this subject as it actually applies to you, but as Rotarians and as aristocrats in the field of intelligence, and in the field of political and economic life, you must bear the load of giving intelligent thought to this problem that directly effects the common man and so, in the final analysis, effects you.

There is one definite thought I desire to establish in this discussion for your consideration, and that is this: That this problem of medical economics is not an isolated economic problem. It is a part of the whole economic problem and it can only be settled as other economic problems are intelligently settled. It is no more an isolated economic problem than the tariff, or taxes, or the farm problem, or the problem of unemployment, because any problem that effects 120,000,000 people cannot be separated from all the other problems.

We have quite definitely established the political, educational and religious rights of men, but we have not solved or established his economic rights, unless we are prepared to adopt the philosophy that "Might is Right," that the superman is our ultimate goal and that the few enjoy certain privileges over the many. I do not believe that as Americans we are ready to adopt such a program at the present time. We have emancipated man economically from tenancy and feudalism. The question now is, have we enslaved him in a new industrialism and in a new form of tenancy and perhaps in a new form of feudalistic office holding democracy. The ul-

Paper Given By R. K. Packard, M.D. April 28th, 1932, before the Rotary Club of Evanston.

timate goal of a democracy is not the constant increasing of laws, with their added burdens to the people, but rather a constant decrease of their laws with an increase in the education of the people governed.

In the last few years, particularly from '21 to '29, we thought we had perfected nearly a complete and beautiful garden of democracy. All was well; we thought the garden was full of flowers — at least there seemed to be only one weed in it and that weed was the problem of medical economics, or what has been more generally called, "The high cost of medical care," and so menancing did that weed seem to be that magazines, newspapers and periodicals were full of it and the middle class had been completely emancipated from all other evils and reformers, social workers and philanthropists pointed out the evil and said it must be corrected, and finally, as a parting shot, big business men said that unless the medical profession could and would solve this very easy problem, they would have to take it over and organize it on a business basis, a production basis and thus emancipate the common man from his last bondage of slavery. But, while they were talking about this weed, we all woke up to find that this great garden was full of weeds and those weeds were political, social, religious, economic, unemployment, bank failures, defaulted Government, City and Municipal bonds, business failures, noble experiments, reparations, bankrupt cities, gold standard threatened, dividends discontinued, racketeers flourishing and so now the little weed of medical economics has just been crushed out by big, strong, able-bodied weeds; and the garden is so full, so world-wide, that we don't know where to start pruning those weeds.

I want to assure you that I, as a professional man, take no particular joy in these facts, because it has cost me, in investments and in income as it has you, and I am not an exponent of any new social or economic order of things, but rather that we should address ourselves to the task of attempting to solve some of our existing problems and to learn from the book of history and experience; that we attempt to institute some form of preventative medicine in the evils of recurring epidemics of political, social and economic disorders. I do not come to you with suggestions as to a cure. I may have some ideas regardng them, but I do come to stimulate discussion that out of all men's thoughts, some good may accrue. I would be bold enough to attempt some experiments, for unless we are willing to experiment, we can make no great progress. If we will admit that up to the present our therapeutic management has not been quite satisfactory, then there is hope for improvement, but if we are content, then we will have recurring epidemics.

The attempt to settle the medical economic problem of the great middle class by county hospitals, charity hospitals, free clinics and part-pay institutions, is, in the final analysis, not a solving of the economic problem, but rather a distorted and expensive program of shifting this responsibility to those philanthropic individuals and doctors who, in the name of humanity, assume an economic problem themselves, that should be assumed by our whole social and economic structure. In our present crisis a large number of these people have not become objects of medical charity, but of rent, boots and shoes, clothing, food, etc. This last is also given in the name of humanity, but we are all agreed that it is not the proper solution of their present problem. The solution, we further agree, is dependent upon an income sufficient to take care of these obligations. No real American wants to be an object of charity. He desires to pay. He always accepts charity as the last resort. That independent and honest attitude can be changed if you pursue a national propaganda that he is entitled to it, that he has been robbed and such propaganda has been spread in the medical economic literature of the past and today some reformers are attempting to exploit such propaganda in other fields of economic distress; notably the plea to tax the rich, to issue bonds for unemployments, the dole system in England, and the communism of Russia are but an extended form of propaganda; not that they shall receive charity, but that they will divide, not what they have, but what they have not. It is an unfounded and dangerous propaganda applied to any economic picture, and in whatever branch it is fostered, it is but a stepping stone to additional so-called rights and disorders.

I would not infer that we have no economic problems in medicine effecting the middle class. We have just such a problem. The problem is: "How should that problem be solved to the best interests of society as a whole." On second thought it might be — Is our chief economic problem the high cost, or the present cost of medical care, or is it that under our present economic system that there are large numbers needing medical care who are not financially able to obtain it at the present time. Third, under our present system is the distribution of medical care, especially in the charity field, properly distributed?

I want to acquaint you very briefly with some of the facts concerning the above and with the very broad scope of this study. The Committee on the Cost of Medical Care, organized in Washington five years ago, of which Dr. Ray Lyman Wilbur is the Chairman, have just completed a five year study. This study was made under three rather general headings, just are as follows:

1. A preliminary survey showing the incidence of disease and disability requiring medical services, and of generally existing facilities for dealing with them.
2. Study on the cost to the family of medical service, and the return accruing to the physician and other agents furnishing such services.
3. An analysis of specially organized facilities for medical care now serving particular groups of the population.

Some twelve or fifteen subdivisions under each heading were made, going into the exhaustive study of the problems confronting the profession and the public. Just shortly, dealing with the incidence of disease, this study disclosed the fact that in such a preventable disease as malaria, there are 700,000 malaria cases in the United States each year. It was also estimated that there are more than 350,000 children in the United States who have incureable bad conditions that are not being treated and that handicap them both physically and economically. it is further estimated that out of the present number of children attending schools, one million will enter institutions for mental disease during their life-time. It is also estimated that in certain areas of the United States, twenty-five per cent of the people forced by sickness to remain away from their employment do not receive medical care. It is further estimated that only twenty per cent of the people in the United States rceeive proper dental examinations and treatment.

Further study reveals the fact that people are, on the average, disabled by illness at least once annually, the rate varying as follows by sex and age: Men about once a year, women from once to twice and children over twice per school year. On the basis of the studies made, which were made by the United States Public Health Survey, there would be about 130,000, 000 cases of disabling illness in the United States each year and if non-disabling illnesses be added, this figure would be more than doubled. Adult males lose from seven to eight days per year on the average and adult females lose from eight to twelve days. Of 570,000 people in industrial communities, studied by the Metropolitan Life Insurance Company, two per cent were ill on the average of a single day. This indicates an average loss of time for both sexes of nearly seven days per year. In general, the above data would indicate that the 36,000,000 wage earners in the United States lose at least 250,000,000 work days per year and the 24,-000,000 school children lose 170,000,000 days per school year. These figures take into account less than one-half of the total population.

I offer these illustrations only to accentuate the broad scope of the question of medical economics at the present time, and to emphasize again that discussions on this subject should be based to some degree upon knowledge of existing facts.

I think from the foregoing you gained some slight idea of the scope of this problem from this particular field of study.

Let us give attention, for just a short time, to the question of the present cost of medicine. If you were to ask me, "Is the present cost of medical care to the middle class too high," I think that in the light of my present knowledge I should answer, "Yes." When we take into consideration that the average income per year in the United States of this class of people is less than $1250.00 a year and the average family consists of more than four, we are convinced not only that the present cost of medical care

is too high, but that the present cost of all the other essentials of life are entirely too high for the present income. Let us take a family of four people, man, wife and two growing children, in the city, and assume an income of $1500.00 a year. This is $250.00 higher than the average in a recent survey of 30,000 employes where $1250.00 a year was the actual income. We will find the following information about our average family:

We are now considering an average family in the normal economic time — not in our present depression. Our four people in this family have a home consisting of at least four rooms, that is, providing we are now speaking in terms of health. Four such rooms in the city would cost a minimum rental of $50.00 per month, which would equal $600.00 a year. Food for four people, at 50c a day a piece, amounts to $750.00 a year. Clothing at $50.00 a piece, amounts to $200.00 a year. This is a total expense for rent, food and clothing of $1530.00 a year, or $30.00 a year above the maximum average income, allowing $250.00 more than the actual survey as shown, with nothing left for amusements, education, church, travel or sickness. It may be argued that they can live much cheaper, but let me reply that health is not just a matter of hospitals, doctors and nurses, it is a problem of home, hygiene, of food, clothing, rest, recreation, education and moral and spiritual development. We should be just as much concerned in the prevention of the development of disease by proper living as we are in attempting to reduce the cost of medical care that might have been prevented.

Relative to the income of professional men: A report of the Committee from Shelby County, Indiana, furnishes some interesting data. Shelby County has been selected as being in general a typical county of mid-western United States. Shelby County, Indiana, has an area of about 400 square miles, a population of about 25,000 and is principally devoted to agriculture, although in the county seat, Shelbyville, which has a population of about 10,500, there is considerable manufacturing of furniture.

There are in Shelby County, 31 physicians, 15 dentists, Christian Science practitioneers, 5 Chiropractors, 1 Optometrist, 1 Osteopath and 1 Chiropodist. Eight are under 50 years of age, twelve are 60 years or better and four graduated during the last 10 years. Seven, or less than one-quarter, had post-graduate courses during the 10 years previous to 1929.

The most common fee for an ordinary office call in Shelbyville is from $1.00 to $2.00. Physicians outside of Shelbyville charge less for office calls, some as little as 50c. The fee for home visits by Shelbyville physicians is $2.00, plus 50c per mile outside of the city, plus 50c for night calls. The usual obstetrical fee in Shelbyville is $25.00; rural physicians charging $15.00. The total net income of thirty physicians in 1928 was $102,000 being less than $3500 a year. Of the 15 dentists in Shelby County, the total net income was $35,000 or a little better than $2000 a year. $47,000 was spent during this year for patent medicines.

The Metropolitan Life Insurance Company, recently conducted a survey on medical costs of 3,281 families, consisting of 17,129 persons, for a period of six months from January 1, 1929 to June 30, 1929. The average number in a family was five plus. The average cost per family was $70.00 for a six month period, or at the rate of $140.00 per year per family or approximately $28.00 per person per year. This cost included medical care, dental care, hospital bills, drug bills, nursing service and added household expenses incurred by sickness. Forty-three per cent of the total was paid to doctors, or an average of about three and one-half cents per day per person for doctor's fees, or $65.00 per family per year. This is probably much less than the average amount spent per person for candies, chewing gum and tobacco. This burden was not evenly distributed, of course, some having no expense at all and some a relatively large expense. Sixty-four per cent of the total cost was expended by one-fifth of the total number of families. This is, naturally, a difficult problem to correct, for no doubt the burden of expense in some families is far beyond their means of meeting such expense. It would seem, off-hand, that such a condition can be equalized only by some form of insurance.

The Committee on the Cost of Medical Care reports that the fees for rural physicians in 17 Massachusetts towns were made, and also the current charges for a round trip to the same points by local garages. In five cases the doc-

tor charged only $2.00 more and in one case $2.00 less. The Committee further reports that especially in rural communities do incomes seem inadequate and this is largely due to the amount of charity work doctors are called upon to perform.

The distribution of medical care is very uneven, both as regards doctors, hospitals and other facilities. As an illustration, a single county in North Carolina, of 18,000 people, has only four doctors and no hospital, while in Chicago there is a doctor for every 500 people and a hospital bed for about every 250 people, with an average of about 4,000 vacant hospital beds daily. It would seem then that those interested in reducing the cost of medical care and desiring to place their money where it will accomplish the greatest amount of good, should seek some intelligent information as to the actual needs by communities for further hospital construction.

The advent of the specialist has added much to the cost of medical care in certain communities and undoubtedly in a large number of cases it is entirely unneeded. A great deal of agitation has been created in the public mind by picking out those rare instances where a doctor has made exorbitant charges for services rendered according to the ability of the individual to pay for such services. The reporting of such instances is indeed an unfortunate thing for the profession. It may, however, serve to correct such practices. Such practices do not have the approval of the medical profession and I think this is generally well understood by the patient. It is my firm conviction that the majority of medical men in this country are making an effort to charge the patient what they think is within the patient's economic status. Much of the high-cost of medical care is, in fact, entirely out of the province of the physician. The expenses of maintaining and operating a hospital cannot be curtailed to a large degree. The cost of construction, the cost of heating, the cost of help and maintaining the organization are the same as in all other lines of business.

In conclusion let us assume that all parties to the controversy have some arguments in their favor. There are few questions of political, social, religious, educational, or economic that are entirely one-sided. So this problem is greater than just a brief editorial of commendation or condemnation can dispose of. It is also too great merely to say that the present status of medical care and medical costs is satisfactory or correct. Even a mere discussion of the cost of medical care, brings up too many problems to settle it out of hand.

For example, medicine and its practice in the preservation of health is not only a professional problem or an individual problem between the physician and his patient, but it is essentially and necessarily a state problem, a social problem, and an economic problem. It is a professional problem because it can be handled only from the scientific end by professional men. It is a state problem because the health of the individual is necessarily a matter of great importance to the state. It is a social problem because it deals with society as a whole. It is an economic problem because the patient needs medical supervision and care that can be obtained only at some cost to some one whether physician, hospital, nurse, family, individual, or the community.

It would seem that the practice of medicine is not essentially unlike other problems of state, government, society and industry. Every business in our land has essentially the same principals to consider. It would seem then that we must accept some of these fundamental facts if we are to arrive at any well balanced conclusion, and any other will add only chaos and discontent to our present condition, both as regards the public and the profession. For the profession to assume that it has no faults or unworthy members would be as erroneous as the church to assume that it can make no progress or that all of its members are Christians, or for the bankers to assume that if left unwatched they would make no errors or have no unscrupulous members, or that institutions of learning need no guidance and that all professors are essentially educators. We admit that the church, banking institutions, educational establishments and industry in general, all have made progress and raised their standards in the last few years. Measuring the progress of these, and then measuring the scientific health advance made in the same period, it is obvious that medicine has more than kept pace with the forward march of events.

Our first concern, then, must be that in all branches of society, business, professional, educational, spiritual, this progress must not be stifled and must be left to the initiative hands of progress. We decry Bolshevism and socialism because the very essence of its creed is to put four-wheel brakes on individual capacity and initiative, and yet this is the serious problem confronting medicine if we are to accept the theory advanced by some that the practice of medicine must be taken out of the hands of professional men and placed on a commercial basis in order to reduce its present cost. When you analyze such a proposal, you discover at once that it applies also to the banker, the manufacturer, the social worker, the philanthropist, in fact everyone who has any service to render to the common man, and derives a living from such service. Is the cost of medical care essentially different from the cost of other essentials of our modern scientific civilization? If the average income earner can afford all the other essentials and some of the luxuries of today, is medical care such a freak of our national development that it needs to be essentially pauperized?

It is always admitted that medical care is never denied anyone who needs it, and that in a very large percentage of cases the question of payment is the last consideration. The profession itself has developed this code of financial ethics. In no other branch of organized society is a commodity sold on so little credit information. The refusal or inability to pay bills means a drastic complete cut-off of service in all other lines, but never where medical care is needed is it refused because of lack of ability of the patient to pay. At least we can assume that this is the recognized custom of the medical profession, and the exceptions are certainly far fewer than are the exceptions in other lines to the recognized ethics of good business. One can say this without decrying big business. Business on large lines is essential; large fortunes are not incompatible with organized society. It is American and sound to believe in individual initiative and the result gained therefrom, and that the largest progress in every line results from such individual initiative. Every act of organized society and government that weakens or defeats individualism and initiative, is a forerunner to socialistic tendency — and I care not whether the government is monarchy or is republic. If its acts are a constant negation of individualism, it is on the road to communism.

It seems then that the essential thing to determine first is the protection of our present standard of medical care of trained professional men, and that our efforts should be directed to a continuation of the production of better doctors, rather than to any change that will result in a decline in the ability of our professional service. It must be admitted by all thoughtful men that any decline in competent professional care will necessarily add to the economic loss as a whole, irrespective of the price paid for such services. The medical profession through its own organization, has steadily raised the quality and training of its members. It has raised the standards of hospitals. It has steadily worked for, and in many instances accomplished, the prevention of disease. It has been the producing factor in better hygiene and in materially lengthening the life of man. If some statistician would figure the economic saving to the country accomplished through the decrease in infant mortality, thru the prevention of such common ailments as diptheria, malaria, thyphoid fever and tuberculosis, and the added longevity of life with its increased earnings, it certainly would compare favorably with the economic saving in all our great industrial organization now based on mass production. The profession has not made these diseases cheaper but they have actually made them preventable. If we are willing to accept, then, the fact that the practice of medicine is both an art and a science, we need not discuss the utter futility of putting medicine on a commercial basis, because it is not a product of mass production: it is an individual art, and when that is taken away the practice of medicine will not only stop progress, but will retrogress.

R. K. Packard, M.D.
Chairman, Committee on Medical Economics

A college professor, according to *Underwriter's Review,* lamented thus to his students: "This class reminds me of Kaffee Hag—99 percent of the active element has been removed from the bean." —*Printers' Ink.*

Medicine's Role in the War Effort

SOLDIERS' AND SAILORS' CIVIL RELIEF ACT AMENDMENTS

Prepared by the Bureau of Legal Medicine and Legislation

The Soldiers' and Sailors' Civil Relief Act was approved on Oct. 17, 1940. Its purpose, as indicated in an analysis of it that was published in THE JOURNAL, Jan. 24, 1942, page 306, was to free persons in military service from harassment and injury to their civil rights during their term of military service and thus to enable them to devote their entire energy to the national defense. Experience under the act, however, has disclosed many defects and shortcomings, and numerous bills have been introduced in the Congress dealing with specific problems that have arisen. A subcommittee of the House Committee on Military Affairs was appointed to study the various proposals and as a result of that study legislation was drafted, H. R. 7164, to extend the relief and benefits provided under the original act. This bill has now passed the House and Senate and was approved by the President on October 6.

IN GENERAL

The new law extends benefits to transactions that have occurred since Oct. 17, 1940. It extends benefits to persons who serve with the forces of any nation with which the United States may be allied in the prosecution of the war and who immediately prior to such service were citizens of the United States. Persons who have been ordered to report for induction under the Selective Training and Service Act will be entitled to benefits during the period beginning on the date of receipt of such an order and ending on the date on which such person reports for induction. Any member of the Enlisted Reserve Corps who is ordered to report for military service will be entitled to benefits during the period beginning on the date of receipt of such order and ending on the date on which he reports for such service. The Secretary of War and the Secretary of the Navy are required to make provision in such manner as each may deem appropriate for his respective department, to insure the giving of notice of the benefits accorded by the act to persons in and to persons entering military service.

LEASES

Of particular interest to physicians is the new provision relating to leases. Under the original act no provision was made for the cancellation of leases, nor did the section relating to leases apply to leases on property used for office purposes. The new law applies to any lease covering premises occupied for dwelling, professional, business, agricultural or similar purposes in any case in which (*a*) such lease was executed by or on the behalf of a person who, after the execution of such lease, enters military service and (*b*) the premises so leased have been occupied for such purpose or for a combination of such purposes by such person or by him and his dependents.

Any such lease may be terminated by notice in writing delivered to the lessor (or his grantee) or to the lessor's (or his grantee's) agent by the lessee at any time following the date of the beginning of his period of military service. Delivery of such notice may be accomplished by placing it in an envelope properly stamped and duly addressed to the lessor (or his grantee) or to the lessor's (or his grantee's) agent and de-

positing the notice in the mails. Termination of any such lease providing for monthly payment of rent will not be effective until thirty days after the first date on which the next rental payment is due and payable subsequent to the date when such notice is delivered or mailed. In the case of all other leases, termination will be effected on the last day of the month following the month in which the notice is delivered or mailed, and in such cases any unpaid rental for a period preceding termination shall be proratably computed and any rental paid in advance for a period succeeding termination must be refunded by the lessor (or his assignee).

On application by the lessor to an appropriate court prior to the termination period provided for in the notice, any relief granted by the act will be subject to such modifications or restrictions as, in the opinion of the court, justice and equity may in the circumstances require.

Any person who knowingly seizes, holds or detains the personal effects, clothing, furniture or other property of any person who has lawfully terminated a lease covered by the act or in any manner interferes with the removal of such property from the premises covered by the lease, for the purpose of subjecting or attempting to subject any of the property to a claim for rent accruing subsequent to the date of termination of the lease, or attempts so to do, will be guilty of a misdemeanor and punishable by imprisonment not to exceed one year or by fine not to exceed $1,000 or both.

STORAGE LIENS

A new section clarifies the original act in connection with the protection of persons coming into service from foreclosure of storage liens on household goods stored for the period of military service. No person may exercise any right to foreclose or enforce any lien for storage of household goods, furniture or personal effects of a person in military service during such person's period of service and for three months thereafter except on an order previously granted by a court. In such a proceeding the court may, unless in the opinion of the court the ability of the defendant to pay the storage charges due is not materially affected by reason of his military service, (*a*) stay the proceedings or (*b*) make such other disposition of the case as may be equitable to conserve the interest of all parties.

BENEFITS ACCORDED DEPENDENTS

The dependents of a person in military service will be entitled, on application to a court therefor, to the benefits accorded to persons in military service in connection with rents, instalment contracts, mortgages, liens, assignments and leases, unless in the opinion of the court the ability of such dependents to comply with the terms thereof has not been materially impaired by reason of the military service of the person on whom the applicants are dependent.

INSURANCE PREMIUMS

The benefits of the act in connection with insurance premiums are extended to policies up to $10,000 face value. In order to obtain the benefits, the insured must make written application to the Administrator of Veterans' Affairs. If the insured is outside the continental United States, excluding Alaska and the Panama Canal Zone, the beneficiary may apply for the benefits. The term "policy" is defined to include any contract of life insurance or policy on a life, endowment or term plan, including any benefits in the nature of life insurance arising out of membership in any fraternal or beneficial association. The policy must not provide for the payment of any sum less than the face value thereof or for the payment of an additional amount as premiums if the insured engages in military service. It must not contain any limitation or restriction on coverage relating to engagement in or pursuit of certain types of activities which a person might be required to engage in by virtue of his being in military service. The policy must (1) have been in force on a premium-paying basis at the time of application for benefits and (2) must have been made and a premium paid thereon before Oct. 6, 1942 and not less than thirty days before the date the insured entered into military service. The benefits are not applicable to policies or contracts issued under the War Risk Insurance Act, the World War Veterans Act or the National Service Life Insurance Act of 1940.

The Veterans' Administration is required to give notice to the military and naval authorities of the provisions of the act and must include in such notice an explanation of the provisions for the information of those desiring to make application for the benefits. An insured will have two years after the period of military serv-

ice to repay premiums guaranteed by the government under the act. Interest on such premiums will be payable at the same interest rate as fixed in the policy for policy loans.

MISCELLANEOUS BENEFITS

The section of the original act which authorized in certain circumstances the repossession of automobiles of persons in military service is repealed. A new section prohibits interest at a rate in excess of 6 per cent on obligations of persons in military service incurred prior to his entry therein. A court may grant certain relief with respect to mortgages and taxes on property owned by persons not in military service when the rent for such property is not paid by dependents of persons in military service. The protection provided by the original act in respect of taxes on real property is extended to include taxes (other than income taxes) on personal property. The requirement that such taxes must have fallen due during the period of military service has been eliminated, as has also been the requirement that the person in military service must file an affidavit with the tax collector in order to prevent sale for delinquency without court action. A new section grants to persons in military service relief for a specified period after military service in order to enable them to liquidate their liabilities in an orderly fashion and not be subject to the accrual and payment of these liabilities all at one time. The court may grant an order staying enforcement of obligations either for a period of time equal to the period of military service or, in the case of certain real estate mortgages and contracts, for a period of time equal to the remaining life of the contract plus the period of military service.

J. A. M. A., Oct. 17, 1942

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PLANS TO MEET NEED FOR MEDICAL CARE

Plans for meeting the need for medical care in communities where a shortage of physicians has developed are being made now by the U. S. Public Health Service and the Procurement and Assignment Service of the War Manpower Commission, Paul V. McNutt, chairman of the War Manpower Commission, announced, September 22. He added that the two services are cooperating closely in the planning of this emergency action.

Mr. McNutt explained that in many areas an acute need for medical service has arisen as a result of extraordinary increases in population brought about by expansion of war industries or other war activities. In other areas there is shortage of medical service resulting from the entry of physicians into the armed forces.

Distributed throughout the industrial areas of the country are more than three hundred communities in which the lack of medical care is being felt. The chairman pointed out that among the most critical of these localities are Baltimore County (around Glenn L. Martin Company); Valpariso, Fla.; Huntsville, Ala.; Childersburg, Ala.; LaPorte, Ind.; Charleston, Ind.; Fort Knox, Ky.; Rantoul, Ill.; Texarkana area; Bremerton, Wash.; Pryor-Choteau, Okla.; Vallejo, Calif.; Velasco, Texas; Waynesville, Mo.; Wichita Falls, Texas, and Norfolk, Va.

Mr. McNutt also announced his approval of a statement of policy adopted by the directing board of the Procurement and Assignment Service in which the Procurement and Assignment Service accepts the responsibility of ascertaining the needs of the civilian population for medical service and providing the medical personnel to meet them.

The principles set forth in this policy statement, Mr. McNutt said, were developed in cooperation with the federal officials concerned and have the approval of the Surgeon General of the United States Public Health Service. The statement has been approved by the boards of trustees of the American Medical Association, the American Dental Association and the war service committees of the two associations, and the executive committee representing the State and Territorial Health Officers Association.

Following are the principles recommended by the directing board of the Procurement and Assignment Service for meeting the emergency needs:

1. That it is a responsibility of the Procurement and Assignment Service to ascertain the needs of the civilian population — nonmilitary — for medical service.

2. That it is the responsibility of the Procure-

ment and Assignment Service to aid in providing the medical personnel to meet these needs.

3. That, as now constituted, the Procurement and Assignment Service is not in a position to deal with the financial and administrative problems involved in the provision of medical care.

4. That as far as possible these problems should be met at the state level in view of the many different types of problems and needs and the relation of these and their solution to local situations.

5. That a survey of these needs should be made by the existing committees of the Procurement and Assignment Service with the aid of such technical assistance as may be necessary. It is especially desirable that in determining these needs the state procurement and assignment committee seek the cooperation of the state health department, of the state medical society and of the state dental society, of industry, of organized labor and of other agencies, such as the state defense council, which should be able to make significant contributions to the solution of this problem.

6. That whenever possible the civilian needs as determined by these committees should be met through local arrangements, resources and agencies. In case assistance is needed for the organization, administration or financing of necessary medical or dental services in these areas, the responsibility should devolve on an agency which should include representatives of the state health department, the state medical society and the state dental society, with the cooperation and support — financial and technical — of the appropriate federal agencies, the administration of funds being delegated to the appropriate state agency.

7. That, since these problems have been occasioned by the war and in many instances transcend state lines, the federal government has a definite responsibility to cooperate with the states in meeting these needs by the provision, when necessary, of financial and technical assistance.

8. That the needs for medical care in certain areas are so acute and the pressure from various sources so great that it is imperative to have prompt action for implementation of this program. It appears to the directing board that the

PHYSICIANS WILLING TO CONSIDER RELOCATION

With the large number of Illinois physicians entering military service, there are some communities within the state where physicians are needed now. Likewise there are a number of industrial and ordnance plants which are asking for personnel in their medical divisions.

There are also a number of ethical clinical groups needing physicians in several departments, or for general service which have requested assistance in procuring the type of men desired. This information is filed in the office of the state chairman for the Procurement and Assignment Service.

Some very good appointments are available especially for physicians who have been disqualified for military service, but who can do a considerable amount of work, or for those physicians in good physical condition who are above the present draft age. Any physician desiring the information which is available, will be able to procure same by filling out the attached form, and mailing it to Dr. Harold M. Camp, State Chairman, Procurement and Assignment Service, Monmouth, Illinois.

NAME ..... AGE .....PRESENT LOCATION .....

SCHOOL OF GRADUATION ..... DATE .....

DO YOU DESIRE TO CONDUCT: (1) General practice .....

(2) Specialty .....

Have you had special training or experience in industrial medicine or surgery? .....

....

Would you be interested in a position with an essential industry or at an ordnance plant? .....

What is your own present physical condition? (State whether or not you have any physical impairment which might affect your ability to carry on routine work) .....

responsibility for the initiation of such action rests with the War Manpower Commission.

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RED CROSS BLOOD DONOR SERVICE

The American Red Cross Blood Donor Service was recently selected to receive the Army-Navy Production Award for its work in procuring blood for dried plasma for the armed forces. The eighteen blood donor centers located throughout the country will therefore have the right to fly the Army-Navy Production Award Pennant, and all employees will be privileged to wear special Army-Navy E pins. In February 1941 the Surgeon Generals of the Army and Navy requested the American Red Cross to set up a center to procure blood for 15,000 units of dried plasma for emergency transfusions. Three months later the amount requested was increased to 215,000 units and following the attack on Pearl Harbor the request was made for 165,000 additional units of dried plasma, making a total of 380,000 units for delivery by July 1, and this amount was exceeded three weeks ahead of schedule. The American Red Cross will continue to expand its blood collecting facilities as rapidly as laboratory arrangements can be made to process the blood into dried plasma and into serum albumin, a more recently developed blood substitute.

CORRECTION — PUBLIC HEALTH NURSES NEEDED

The U. S. Civil Service Commission recently issued a call to public health nurses. The commission desires now to correct the statement made regarding the omission of high school education as a requirement for public health nurse positions. This statement was made in error by the commission. The educational requirements for public health nurse cannot be obtained without completion of a high school education.

The requirements are completion, subsequent to Jan. 1, 1920, of a full course in a recognized school of nursing including two years in a general hospital having a daily average of 50 bed patients or more, registration as a graduate nurse and completion of one year of study in public health nursing at a college giving a course of study approved by the National Organization for Public Health Nursing. One year public health nursing experience also is necessary. The public health nurse positions pay $2,000 a year.

Other nursing opportunities open in the federal service are junior public health nurse, $1,800 a year; graduate nurse, $1,800 a year; junior graduate nurse, $1,620; graduate nurse for the Panama Canal service, $168.75 a month; nursing education consultant, $2,600 to $4,600 a year, and public health nursing consultant, $2,600 to $5,600 a year.

Except for Panama Canal service there are no age limits for any of these positions. Applications will be accepted at the commission's office in Washington, D. C., until the needs of the service have been met.

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DR. BAEHR VISITS ENGLAND

Dr. George Baehr, chief medical officer, Office of Civilian Defense, Washington, D. C., has gone to England to study Britain's emergency medical service and to confer with medical leaders. Dr. Baehr will be abroad for several weeks.

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ILLINOIS HOSPITAL UNIT GOES ON ACTIVE DUTY

The University of Illinois Hospital Unit, the twenty-seventh evacuation hospital, left for active duty in October. Dr. Charles B. Puestow, associate professor of surgery at the University of Illinois College of Medicine, Chicago, and now commissioned lieutenant colonel, for some weeks has been at the Walter Reed General Hospital in Washington for a period of training. Lieutenant Colonel Puestow, who organized the unit, will be director of this 750 bed mobile hospital. The other medical members of the personnel are largely University of Illinois alumni. At a party in honor of the unit at the Illini Union Building on the Chicago Campus, September 22, the speakers were Governor Green, Mayor Kelly of Chicago, President Willard and the board of trustees of the University of Illinois, Admiral John Downes, commandant of the ninth naval district, Major Gen. H. S. Aurand, commanding general of the sixth service command, Col. Chester L. Fordney of the U. S. Marines, Col. J. E. Bastian, surgeon of the sixth service command and other officers. Dr. George W. Post Sr., president of the medical alumni of the university, was on the executive committee in charge of the arrangements. Follow-

ing is a list of the personnel of the twenty-seventh evacuation hospital unit:

Lieut. Charles Allison, Kankakee, Ill.
Capt. Robert E. Bedard, Kankakee, Ill.
Capt. Robert P. Blatchley, D. C., Cook County Hospital.
Capt. Daniel E. Bowers, Peoria, Ill.
Capt. Lawrence Breslow, Chicago.
Lieut. John J. Brosnan, Chicago.
Lieut. Joseph H. Buckley, Chicago.
Capt. George V. Byfield, Chicago.
Capt. Clifford L. Carter, Ottawa, Ill.
Lieut. James H. Cross, Chicago.
Dr. Roland Cross Jr., New York (formerly of Chicago).
Dr. Howard I. Down, Sioux City, Iowa.
Capt. Arthur H. Ericson, M. A. C., Chicago.
Dr. Edward G. Evans, Aurora, Ill.
Lieut. Charles E. Fildes, Chicago.
Major William J. Gillesby, Effingham, Ill.
Lieut. Glen Goodwine, M. A. C., Chicago.
Lieut. Harold A. Grimm, Chicago.
Capt. John O. Hanson, Chicago.
Lieut. Noel J. Hershey, Niles, Mich.
Capt. Herman Joffe, Chicago.
Dr. Robert M. Jones, Chicago.
Lieut. Karlton H. Kemp, Texarakana, Texas.
Capt. John P. Klein, Reed City, Mich.
Capt. William P. Kleitsch, Chicago.
Lieut. Sidney Lane, Berrien Center, Mich.
Capt. James W. Lewis, Evanston, Ill.
Capt. Edward S. Lundgren, Chicago.
Capt. John H. Mathis, Atlantic City, N. J.
Major Oscar E. Nadeau, Chicago.
Capt. Edward L. Schrey, Chicago.
Major Archibald Spelman, Smithville, Mo.
Capt. Thomas A. Weaver Jr., Cincinnati.
Lieut. Edward F. Webb, Chicago.
Lieut. John C. Whittier, New York.

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ARMY TO TRAIN PSYCHOLOGISTS TO LIFT ILLITERATE SELECTEES

A training course for civilian psychologists who are to test illiterate Selective Service men will be instituted soon under direction of the adjutant general at Fort Leavenworth, Kansas, the War Department announced, September 24. Those successfully completing the course will serve in the army specialist corps, in which some of the prospective students already have been commissioned. The demand for psychologists is a result of a recently adopted army policy of taking illiterate persons into service when it is felt that the degree of illiteracy is no bar to successful completion of military training. The course offered at Fort Leavenworth in October will be attended by more than a hundred and fifty psychologists, who will receive general indoctrination in army methods and specific instruction in the examining devices used at induction stations. The psychologists will be assigned to induction stations throughout the country. To determine whether a selectee is acceptable, a three part screening process will be used. First an oral interview will be given in which men are passed immediately on the basis of their obvious qualifications or held for further examination. If the man fails to pass the initial interview, he receives a nonlanguage, visual classification, test which is conducted as far as possible in pantomime in order that the test may be fair to men who may be literate in their own language but unable to speak or write English. If on the basis of the first two tests the examining psychologist finds that the registrant is of marginal ability, at his option he may give a third screening, designed to determine whether the selectee can follow oral orders, all simple, but of varying nature. Illiterates who prove acceptable for service will be assigned to units for which their occupational experience best fits them and will have an opportunity to attend night schools or such other extracurricular classes as may be practicable.

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ALLOCATION OF NARCOTIC DRUGS

Under a directive issued by the chairman of the War Production Board, October 6, the U. S. Bureau of Narcotics is authorized to allocate narcotic drugs in such manner and to such extent as it may deem necessary or appropriate in the public interest and to promote the national defense.[1] The bureau may regulate or prohibit the production, manufacture, sale, transfer or other disposition of narcotic drugs by any person who has acted in violation of any regulation or order prescribed by it pursuant to the directive and may require such reports and the keeping of such records and may make such investigation as it deems necessary or appropri-

1. Federal Register, Oct. 7, 1942, p. 7938.

ate. The chairman of the War Production Board may from time to time delegate to the bureau such additional powers with respect to the exercise of control over narcotic drugs or may amend or revoke the delegation contained in the directive in such manner and to such extent as he may determine to be necessary or appropriate. No preference rating heretofore or hereafter assigned, applied or extended will have any binding effect with respect to any transaction in narcotic drugs unless the Bureau of Narcotics expressly so orders. For the purpose of the directive, the term "narcotic drugs" is defined to mean opium, coca leaves, cocaine or any salt, derivative or preparation of opium, coca leaves or cocaine.

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DENTISTS IN TRAINING TO AID PHYSICIANS

Sixteen dentists in Flint, Mich., are taking special training in Flint hospitals at the invitation of the Genesee County Medical Society to enable them to assist physicians by performing certain medical procedures and thus to relieve the shortage of physicians created by the demands of military service. The training will qualify the dentists in obtaining blood for examinations, intravenous feeding, intramuscular injections, intravenous injections and obtaining blood from donors for blood banks. Several of the number are already qualified in some of these fields and are assisting in clinics and with Selective Service examining boards.

Colorado dentists are engaged in a similar program under the auspices of the Colorado State Dental Association and the Committee on Emergency Medical Service of the State Defense Council. The plan was initiated by the presidents of the State Dental Association and of the Denver Dental Association, in cooperation with the board of trustees of the Colorado State Medical Society. Facilities of the University of Colorado School of Medicine and the Colorado General Hospital have been made available for the instruction. A class of seventy dentists has finished a course of lectures on anesthesia, and small groups are now assigned to the hospital for practical training. It is planned that the dentists shall return to the hospital at intervals for review after their training is completed. Preliminary lectures on shock and treatment of open wounds have also been presented.

Classes are being organized in maxillofacial surgery, oral surgery, serology, taking of blood for transfusion, and in the treatment of shock, hemorrhage and open wounds.

Dr. Ralph Christy, president of the state dental association, in a report to the Dental Preparedness Committee of the American Dental Association, emphasized the desire of dentists to assist the medical profession in an emergency, the willingness of physicians to give the necessary instruction and the importance of practical training in hospitals in addition to didactic lectures.

The Medical Division of the Office of Civilian Defense in April issued a statement recommending that dentists qualify themselves in first aid in order that they may act as instructors and as members of emergency medical field units in casualty stations and first aid posts in the event of air raids, in the administration of anesthesia, and in the care of injuries of the face and jaws.

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The great fallacy of the age is the vulgar fallacy that knowledge is power. But not all knowledge is power. Only the knowledge you have faith and aim to use is power; and the instinct of each mind is, I believe, a far better judge of how much knowledge it has faith and aim to use than we commonly suppose.—*Walter Moxon.*

LOWEST DEATH RATE

Lowest death rate in the history of the United States death registration states was recorded in 1941, according to the U. S. Census Bureau. Provisional mortality statistics for that year, just tabulated, show a crude death rate of 10.5 per 1,000 population. The 1940 rate was 10.8, a slight increase over the previous low level of 10.6 reached in 1938 and 1939. There were 21,362 fewer deaths in 1941 than in 1940. Most of the decrease occurred in the rural areas. The greatest decreases were in the District of Columbia, Idaho and Vermont. The greatest increases in death rates for individual states were in Arizona and Virginia. The total number of deaths for the entire nation for 1941 was 1,395,507.—*Science, July* 17, 1942.

★ **BUY WAR BONDS** ★

Original Articles

Symposium on Problems in War Medicine

VENEREAL DISEASE CONTROL SINCE THE ONSET OF WORLD WAR II

R. A. Vonderlehr
Assistant Surgeon General
Division of Venereal Diseases
United States Public Health Service

In the last few months the people in the United States have changed their ideas about wealth. They used to think of America as being materially richer than any country in the world. It has more oil, more coal, more steel, more copper; it has wider and longer rivers, larger forests, richer ore deposits, greater lakes; it has taller buildings, more automobiles, more bathtubs.

Today, this material estimation of wealth does not seem so important. We are beginning to understand that the steel and the coal and the copper, the automobiles and the plumbing, the forests and the rivers, are only a small part of the riches of the United States. We have begun to understand that without manpower all this material has neither form nor significance. The real wealth of the United States is its 130,000,000 people. Kept strong and healthy, and given capable leaders, those 130,000,000 people can forge American materials into tangible wealth in almost any quantity.

The present war has made us acutely conscious of the value of manpower. Men and their skills are needed everywhere. Every locality is contributing men to the war effort. Some are soldiers, trained in the modern technic of making war; others are civilians, employed in war industries, building the tanks and the guns and the planes and the ships with which we wage war. Still others are raising the crops and processing the food which feeds the men of the great war machine.

Warfare in our time is ruthlessly efficient in the armies of our foes. We must surpass this efficiency or become their victims. Only *well* men are valuable in the kind of efficiency we must achieve. *Sick* men have value only insofar as they may one day be *well* men. It is, therefore, a matter of grave concern to all of us that in the American armed forces, venereal disease keeps nearly four of every thousand fighting men out of action all the time. It has been reported that our Army may reach seven million men. If venereal disease continues to operate in an Army of that size at the present rate, 26,000 men will be kept out of action every day. A year has 365 work-days for an Army at war; there are no weekends and no holidays. Thus 26,000 inactive men in an Army every day for a year would result in the loss of about 9½ million soldier-days. And soldier-days, not dollars, may mean liberty in 1942.

Read before the Illinois State Medical Society, Springfield, May 20, 1942. Joint Session of Sections on Medicine, Surgery, Public Health and Hygiene, Pediatrics, and Obstetrics and Gynecology.

Sick men win no battles. They consume food, they wear clothes, they require treatment, and they tie up equipment. But because we are accustomed to think in terms of dollars, let's look at the dollar cost of sick men in the Army. According to figures recently published, it costs about $210 to outfit the average soldier. It also costs about 40c a day to feed him. That means that food and equipment for the average soldier amounts to nearly $360 a year. Twenty-six thousand soldiers with gonorrhea or syphilis would tie up about $5,360,000 worth of equipment and would consume about $3,900,000 worth of food. Add another $3,000,000 for treatment and hospitalization and the total is more than 12 million dollars.

About 3,000 men were lost during the bombing at Pearl Harbor. We consider that, and justly, a major calamity. But how about the men who were "knocked out" before even getting to Pearl Harbor — before, indeed, ever getting into a uniform? How about the 135,000 men out of the first three million selectees who have been found to have syphilis? They, too, represent a major calamity. Pearl Harbor was the second important American action in World War II. The first was fought on a scattered front in every locality in the United States. The enemy was venereal disease. And in that engagement we lost 135,000 men.

But we must qualify the use of the word, "lost". Men killed in battle are totally lost. The 135,000 selectees who were found to have syphilis can be reclaimed. Until they are they remain mobile sources of infection to others. They are a handicap and a threat to the war effort so long as they are allowed to go untreated.

Health departments have recorded that only about half of the selectees found to have syphilis out of the first million men examined are now under treatment. All the rest are at large unless they have been treated by private physicians and this fact not reported to the Selective Service System. Moreover, many of the contacts who infected these men are still at large, and are doubtless infecting others.

You in Illinois have some satisfaction in the fact that your State rates fairly low in a tabulation of the prevalence of syphilis among selectees. Of the first million men examined, the Illinois rate for syphilis was 22.7 per thousand as compared with 45.2 for the entire country. This speaks well for Illinois when we consider that it is one of the most populous States in the Union and that it has the second largest city. It should be noted, too, that Chicago's rate of 21.5 per thousand is lower than that of any other American city with a population over a million people. This is ample testimony for the effectiveness of the venereal disease control program which has been carried on in Chicago in recent years and for the wholehearted participation of physicians throughout the State. Less satisfaction is derived from the fact that in Illinois there are 78 counties, representing more than one-fourth of the total population of the State, that have no venereal disease clinic facilities. While Illinois has been doing well it still has a big job to do.

According to a Census Bureau estimate, there are now over 16,000,000 men in the United States between the ages of 21 and 35. If we apply the established rate for the United States of 45.2 cases of syphilis per thousand men to 16,000,000, we find that 700,000 men of active military age in this country now show evidence of syphilis. This is almost 200,000 more men than were in the entire United States Army before mobilization. It is about 4½ percent of our total manpower between the ages of 21 and 35. Everyone of those men is now unacceptable for military service until he has been adequately treated.

Such waste of manpower is unnecessary. We have at our command the technical knowledge to render most of these men fit for duty. The United Nations must match the axis gun for gun, plane for plane, ship for ship, and *man* for *man* in a very short time to win the war. Manpower is our most precious national resource.

Good personnel, perhaps the most vital part of what we call an "adequate program," is built around a good doctor; not any doctor — much less one who roots his way to a place at the public trough because he hasn't what it takes to make a place for himself anywhere else. It means a doctor thoroughly trained in the special skills of venereal disease treatment. If he is a zealot, all the better. This still is an evangelical job.

Nurses must be specially trained, as must social workers who find and bring under treatment both the source of the infection and those to whom it has been transmitted by the patient. There must be competent clerks to keep case records as carefully as the record of scientific experiments is kept in the laboratory. These are human documents. Upon their accuracy depends life and death, whether the patient is cured, self-sufficient, able to carry his own load — or whether he becomes a human derelict, a charge on the community.

Reliable laboratory service, drugs, modern scientific equipment, skilled personnel — no matter how abundantly all are provided — still lack effectiveness if housed in a hovel. Clinic quarters must be commodious enough to accommodate comfortably all patients who come for treatment, must afford space for personnel to administer medical care with reasonable consideration for privacy, and must be as clean as the private rooms of a good hospital. They need not be elegant. They must be decent.

The clinic which returns dividends on the public dollar by doing well the work for which it is designed must be located where people can get to it easily. It must offer treatment at hours when patients can come. Though a few of its patients be the scum of the earth, results will be better if they are treated with friendly courtesy. If venereal disease affected only the scum of the earth, it would not be a public health problem. It does strike many decent, frightened, unfortunate folk who have no chance for cure except at the public clinic. They must be found and given sufficient treatment. There is no hope of giving sufficient treatment unless the clinic is operated in the spirit of compassion for the relief of human suffering.

We have names and addresses of infected selectees, and, in some cases, names and addresses of those who infected them. We are getting more and more. They must be placed under treatment while the names and the addresses still go together. Sluggishness on our part now will cancel the greatest contribution to venereal disease control in our time.

Need number one, therefore, is to get infected selectees and those who infected them under treatment. If your local board of health already is working on the problem, get in touch with them. They will appreciate your offer of assistance and will doubtless give you an assignment. If they are not active, prod them. In this time of crisis, the American people must outlaw the phrase, "business as usual." None of us — health officers, nurses, or practicing physicians — has a right to expect to do "business as usual" anymore than the men who made and sold automobiles or the men now in the armed forces.

I have long been an advocate of blood testing as the best device for finding persons infected with venereal disease. But as I have said, serologic tests of selectees have already found more infected persons than we have clinic facilities to treat adequately. Routine blood tests to only three groups: expectant mothers, applicants for marriage licenses, and selectees, are now being given at the rate of 4,400,000 annually and are turning up patients at a rate of over 126,000 a year. Blood tests to all groups for all purposes are being given at a rate of about 17,000,000 a year. The emergency problem is, therefore, not so much one of expanding the facilities for finding cases as taking care of the cases the machinery already at work is turning up.

Please do not misunderstand me. I still think that all persons who come to hospitals or to private physicians for treatment should be urged to take blood tests. We must go on finding cases. And the blood test not only finds cases, but better than all the pamphlets ever printed it educates. It shows people a simple way of knowing for sure. Having had a personal demonstration of the simplicity of the blood test, those who have had one are not likely to hesitate to ask for another. But the weakness in the venereal disease control program at present lies in holding patients under treatment rather than finding them.

Treatment of gonorrhea has been greatly facilitated by the amazingly successful use of the sulfonamide drugs. It is rapid, simple and effective. About 90 percent of all cases can be rendered asymptomatic and bacteriologically negative within two weeks. No special facilities are required and the patient need not be quarantined.

But with the treatment of syphilis the problem is different. There may be a time when massive dose therapy will simplify it to a five-day sojourn in a hospital. Indeed the results of massive dose treatment in the Cook County Hospital in Chicago and in other hospitals throughout the country are very encouraging. But the time for universal use of massive dose therapy is not yet, and we must be prepared to do something now.

Treatment of syphilis cracks up all too frequently on the rock of case-holding. Infected patients are found and they go to a private physician or a clinic. In four cases out of five they never take as many as 20 injections of an arsenical drug and 20 of bismuth within an eighteen month period. Sometimes they discontinue treatment because they can't afford it; sometimes because it's inconvenient; sometimes because it's unpleasant. But, syphilis is an infectious disease. It destroys manpower, and it is spread from person to person by direct contact. Those responsible for the public health must develop a case-holding technic which will keep a maximum number of syphilitic patients under treatment through a reasonable number of doses.

Case-holding is, in part, a process of education. The practicing physician who would hold a case through an 18-month, "twenty-twenty treatment" course must have impressed his patient with the absolute necessity of continuing, and must have made the continuation of that treatment as convenient to the patient as possible. Fear will not hold him; bluffing only works if he is stupid; and force could not always be used even if it were desirable. Therefore, the only device left to the physician, and the one most compatible with the practices of democratic government, is that of the teacher. The patient's confidence must be won and his cooperation assured. He must be taught as well as treated.

It is not urged that physicians treat privately additional patients free of charge. Every doctor in the country already carries his share and more of charity patients. But it is urged that patients who cannot pay be referred to public clinics where they can be treated free of charge. If there are no clinic facilities available, the practicing physician should be the first to insist on the establishment of such facilities.

In addition to holding the pay patients by educating them to their responsibilities and urging the institution of clinic facilities for those who cannot pay, the physician should cooperate with his State and local health officers by reporting his own cases. These things will help to conserve precious manpower.

Manpower is the true source of America's wealth. And it is always in manpower that we pay the cost of our folly. We pay the price of crime in manpower because we are largely ignorant of the cause of crime and of how to treat the criminal. We pay the price of war in manpower because statesmanship has not yet discovered how to control war. We pay the price of disease in manpower because too often we are ignorant of its cause and cure.

But we are not ignorant of the cause and cure of venereal disease. We have the means at our disposal to control it. We have the knowledge; we have the medicine; we have the money to provide the facilities; and we have been commissioned by the American people to use this knowledge, medicine and money. Every doctor, nurse and health officer in America can contribute to today's challenge to control venereal disease.

AN ANALYSIS OF THE VISION OF 200 CONSECUTIVE SELECTEES AS SEEN BY AN ADVISORY BOARD OCULIST

G. Henry Mundt, M. D.
CHICAGO

During and following World War 1 there was much talk about the poor physical condition of the youth of this country. Various methods of improving our crop of men were suggested. Among the remedies frequently mentioned was a more universal distribution of medical service. The writer is one of those who has for a long time felt that there was no method of medical distribution that would fit into a democracy by which any considerable number of

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individuals would be materially improved physically. Please understand that after many generations the physical well being may be raised, however this improvement will come as a result of education which will cause parents and the children and youth to demand for their progeny and to a degree for themselves a greater abundance of Brain and Brawn. And the Brain must be a factor if the desired physical standards are to be reached because only by an improved intelligence level can the proportion of individuals in the top disqualifying brackets (as disclosed by selective service examinations) be gradually reduced.

It has been well said that "You can lead a horse to water, but you can't make him drink." By the same token unless an individual is sufficiently well informed (educated) as well as interested he will not make the effort necessary to improve his physical condition or the physical well being of his progeny. This goal requires a true appreciation of the problems as well as the target at which he must aim.

For many years the dental profession have made great effort to enlighten the public on the desirability of improving the teeth and this has been fortified by commercial programs on the radio advertising dental cleansing agents, during nearly all of which the recommendation is made to see the dentist. Notwithstanding more than thirty years of intensified propaganda tooth defects lead the number of disqualifying factors in this selective service effort as it did in the draft of World War 1. I submit that only by a long term continuous effort (extending over several or many generations) can we materially improve the health of our youth. And I hasten to say that there is no evidence available that our youth is not the equal or the superior of the youth of any other country, and in some nations there has been in vogue for years a system of medical service which should have touched every level of the citizenry.

We have all heard over the radio reference to the superior physical condition of the youth of Germany but I think that I can say without fear of successful contradiction that the youth of that nation owes it superior physical preparedness (if it actually is superior) to the system of out of door activity which has for generations been fostered in that country, probably for the purpose of producing a continuous crop of prime fighting men rather than for the purpose which, I would advocate, that of improving youth so that they may have a more sound peace time life.

The selectees here reported upon were referred by their local boards to an Advisory Board for examination as to their vision. It should be born in mind that these men were only those about whom there was a question of visual fitness for induction. The title of this paper should be read in its entirety so that no one may think that 200 selectees picked at random could be as deficient visually as were this two hundred.

The reason for this study was to satisfy the curiosity of the writer as to whether any system of national, state or local medical practice might have materially improved the vision of the youth of this country.

The writer was designated the oculist of an Advisory Board in the latter part of 1940. This had no more than occurred than the deluge of selectees started. A few local boards not understanding the relative function of the local and advisory boards referred great groups of men about whom there was no question of visual fitness. Some boards referred men who had inquired about visual requirements and were weeks or months away from induction and were sent only to satisfy the mind or curiosity of the selectee as to how he would fit into the program. Because of the confusion early in the functioning of the Advisory Boards, I selected the last two hundred men examined by me. Some of these were seen after the function of the board had been abrogated.

This was an opportunity for a study which would have been of the highest interest as well as of considerable value, but the lack of time precluded the study in detail of these men. I took seriously the requirement of the vision being correctable to 20/40 and did not confuse it with corrected to 20/40 which some of the local boards still had great difficulty in differentiating. Where there was a question of correctability which could only be arrived at by cycloplegic refraction this was done. While a more detailed study of some of the men would have been of great interest, the time element

precluded the possibility of doing more than was done because the prime reason for seeing the men was to report back to the local boards, and I say with considerable satisfaction that every report was in the mail the same day that the examination was completed. The work was done in the private office of the writer along with his private practice and by the time that the group which is being reported upon was seen the selectees had been reduced to a trickle. The men reported upon were seen from September 9, 1941 to February 11, 1942, distributed as follows:

September 9-30, 1941	44
October, 1941	43
November, 1941	58
December, 1941	32
January, 1942	20
February, 1942	3
Total	200

Because of the exigency of the examination the minimum amount of work was done which would enable the proper classification of the examinee.

For gross classification there were three main divisions into which the men had to be placed:

1A—Minimum vision of 20/100 in each eye improvable to 20/40 in each eye.

1B—Minimum vision of 20/400 in each eye improvable to 20/40 in one eye.

4 —Those who did not reach the above two standards.

On this classification the result of the survey was as follows:

20/100 binocularly to 20/40 binocularly	53	or	26.5%
20/400 binocularly to 20/40 in one eye	135	or	67.5%
Less than the above	12	or	6 %
Total	200	or	100 %

There were doubtless many men who were visually unfit who were not sent by their local boards.

Among this two hundred not one malingerer was found. There were eighteen cases of strabismus (convergent 14, divergent 3, vertical 1). There was one marked nystagmus.

Six men had anterior segment lesions of sufficient import to place them in Class 1B or 4. Only four or 2% of the total had sustained trauma sufficient to place them in 1B or 4, and only one of these or one half of one percent of the total had less than 20/200 vision. This percentage would undoubtedly be higher in the rank and file of selectees. Parenthetically I should like to say that there was only one air gun injury among the group disqualified for 1A classification so that the effort to prevent this type of injury must have born fruit.

There were ten gross unilateral fundus lesions and one gross bilateral fundus lesion observed. Undoubtedly more would have been found if it had been necessary to look for them to arrive at a classification.

Of the two hundred men where refraction was done or checked, there were forty-one hypermetropic or had hypermetropic astigmatism. Of these fourteen had high hypermetropic astigmatism, four had high hypermetropia. Eight had vision of 20/200 — 20/100 improvable to 20/40 or better, 15 had vision of 20/100 or better improvable to 20/40 or better.

The very distressing thing to the writer was the very high proportion of myopic individuals in this group. The writer is one of those who feels certain that there is something to be done about myopia other than prescribing a pair of lenses and allowing the patient to go unobserved until he again finds that he must have an improvement in vision. The proportion of these young men who had had any advice on the use of the eyes was very low indeed and some of them were quite perturbed by the necessity of frequently procuring new (stronger) lenses.

There were of this group of 200 young men 97 whose vision could be improved to 20/40 or better in each eye not withstanding their being myopic. There were others who were myopic whose vision could not be improved to 20/40 in each eye but the number was not arrived at.

From this observation it can readily be seen that myopia is the visual problem in more than one-half of the group here reported upon.

In the light of the proportion of selectees with myopia I suspect that the next step of importance for the eye physician in his contact with the general public (and I should like

to see medicine as a whole help) is to inform the people upon the seriousness of high myopia which is to say the least very inconvenient. With the experience at the United States Naval Academy in mind that men who are emetropic or slightly myopic at entrance are very apt to end their training sufficiently myopic to prevent their functioning as line officers, and that a residue of hypermetropia seems to prevent this tragedy after four years of strenuous eye use, even though a high standard of physical training is entered into we should be in good position to help to guide the public in a visual way.

SUMMARY

1. No form of medical practice would have been more successful in elevating the standard of visual efficiency than the one in vogue in the United States, and if our information is accurate it probably would be less efficient.
2. A long term plan should be evolved to lessen the development of high myopia, bearing in mind that little or no effect may be had upon the present generation, but that education may and probably will be able to help generations unborn.

AN ANALYSIS OF CARDIAC ABNORMALITIES IN 460 SELECTEES

D. E. Markson, M.D., F.A.C.P. and
M. P. Gethner, M.D.
CHICAGO

In reviewing the statistics* for the last war 1914-1918, Lewis estimated that about five sixths of the British Army diagnosis of organic heart disease were erroneous. The enormous wastage of man power, invalidism, and pensions resulting is clearly brought out in his report which shows that seventy thousand soldiers were invalided for organic heart disease and forty-four thousand for effort syndrome.[1] In looking over the statistics of the American army as compiled in Vol. XV, p. 222, World War Statistics[2] one finds that the morbidity from cardiac disease, measured in days lost from service, was as follows: — valvular heart disease 487,977 of which aortic insufficiency represented 42,822, aortic stenosis 7,374, mitral insufficiency 335,227, mitral stenosis 67,765, combined mitral and aortic 15,763, etc.; arteriosclerosis and hypertension 16,639; functional disorder of the heart 92,434. These statistics include the total officers and enlisted men of the American troops.

It is obvious from these statistics that a correct evaluation of cardiac abnormalities for the induction of draftees puts upon the examiner a tremendous responsibility in the correct analysis of the individual case. To quote from Volume VI[3] of Physical Standards, "Men who desire to serve their country may from patriotic motives endeavor to conceal known valvular lesions which have given no symptoms. On the other hand men drafted for service may allege or feign symptoms to obtain exemption. It is necessary that the conclusions of the examining physician in doubtful cases will be based on objective evidence in the widest sense, physical signs, cardiac rhythm, blood pressure measurements and observed effect of effort. In the presence of questionable signs and symptoms, the history, especially of rheumatic fever may be a factor in the final decision. The examining physician's duty is to protect the interest of the Government by preventing the entrance of men whose circulatory system may be expected to break down under strain, equally by preventing the discharge of fit subjects because of unimportant deviations from normal."

The purpose of this paper is to review the statistics of the draftees referred for cardiac abnormalities to the Advisory Board No. 2, located at the Norwegian American Hospital in Chicago. Board No. 2 acted as consultant for fifty-two local boards, which included about one-third of the city's population and geographically included the north, the northwest and west portions of the city. The personnel of the Board included specialists in the major branches of surgery and medicine, who, for the most part, are members of the various American Boards. The work was begun in November, 1940 and terminated in December, 1941.

The age group of the peace time selection was 18 to 35. It may be proper to add here that the problems of a peace time draft differ

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*We are indebted to Miss Joyce A. Kessler, our secretary, who helped us collect these statistics.

somewhat from that of the induction of the prospective soldier during war. It was felt in our group that only those physically fit should be included as there were approximately sixteen million from which the required one and one half million could be drawn.

An attempt was made to standardize the cardiac examinations in our own interest or in the event others should be called in to assist us. All diastolic murmurs whether heard at the apex or at the base of the heart were considered to be organic heart disease and the draftee with such a finding was rejected. The systolic murmur, heard in so many healthy adults, was considered significant[1] only when the intensity of the murmur was loud, was increased by effort, was heard after deep inspiration and after expiration, and was present with change of posture. In addition, in obscure systolic murmurs, electrocardiographic and radiographic studies were done and an attempt to check up the past history for rheumatic fever was made.

In the 157 electrocardiographic studies of the entire group with cardiac abnormalities, we felt that the electrocardiogram was not significant in establishing the status of the prospective soldier under thirty. The repeated examinations of the heart, in the questionable cases, were definitely of more value in making final conclusions than was the electrocardiogram. This is substantiated by others[4]. In spite of our honest effort to make final decisions we were compelled to classify some as re-examination in six months, or 1B status.

The pre-systolic crescendo murmur terminating in a snappy first tone was considered as organic heart disease, particularly when the intensity increased after exercise. This murmur was often confused with the grating sound of the first tone occurring in the rapid heart of the apprehensive individual.

The hypertensive group, whether transient or persistent, with systolic pressure above 150 and diastolic above 90, were given a basal metabolic reading, an electrocardiogram, and, in some instances, intravenous pyelography was done. Re-examinations were carried out two, and in the majority, three times to rule out the influence of fear on the blood pressure reading. In no instance in this group was there any evident pathology in the ureter or kidney, as evidenced in the pyelogram. The basal metabolism alone to rule out hyperthyroidism could not be relied upon and the final decision was dependent on the careful re-check of the individual under controlled conditions. In view of the negative evidence of a causative factor in this group of fifty-eight, they were classified as essential or persistent hypertension.

Table I is a summary of the total number referred to Advisory Board No. II with questionable cardiac abnormalities. Of this group of 460, one hundred and seventeen (25%) were considered normal. The deviations from normal in this group were consistent with healthy hearts and represented variations of the normal sinus mechanism.

Essential hypertension was found in 58 or 13% of the group; rheumatic heart disease 137 or 30%; neurocirculatory asthenia in 107 or 23%; other groups 41 or 9%. It is significant that neurocirculatory asthenia made up about one-third of the entire group.

Table I

Total number of cardiac cases referred from Local Boards		460	
A. Minor Deviation from Normal		117	25%
Sinus arrhythmia — sinus tachycardia questionable murmurs			
B. Essential Hypertension		58	13%
C. Rheumatic Heart Disease		137	30%
Mitral insufficiency	72		
Mitral stenosis	34		
Aortic insufficiency	5		
Mitral and Aortic insufficiency	8		
Unclassified	18		
D. Neurocirculatory Asthenia		107	23%
E. Organic Heart Disease (not clearly classified)			
Cardiac Hupertrophy	7		
Endocarditis	1		
Myocarditis	19		
Arrhythmias	9		
		36	8%
F. Arteriosclerotic Hypertensive Heart Disease	2		
G. Auricular Flutter	1		
H. Aneurysm (Luetic)	1		
I. Aortitis (Luetic)	1		1%
Total		460	

Table II. Shows the number of rejections for the entire group of 460, — 294 or 64%. These were classified as follows 1B, 93 or 32%; IV, 201 or 68%. It is possible that in the 1B group may be found who are fit for service in future re-examinations. However, it is more probable that most of these will be later classified IV, unfit for service.

Expressed objectively we were able to salvage for service 166 of the 460 referred or 36%.

The basis for rejection as set forth in paragraph 55, 56 and 57, "Physical Standards 3. as follows: Class 1B, "there are no cardiovascular criteria to warrant initial selection for this classification." However, it was decided after a conference with Major Hartlett, that 're-examination in six months' or 1B classification could be used in obscure cases. In class IV, circulatory failure, hypertrophy and dilatation, persistent tachycardia above 100, paroxysmal tachycardia, heart block, auricular fibrillation, valvular disease, congenital heart disease, persistent blood pressure above 150 systolic or above 90 diastolic, thrombophlebitis, abnormalities of the peripheral vascular system (Raynaud's, etc.,) aneurysm of any vessel, pericarditis, acute endocarditis, angina pectoris, coronary thrombosis, neurocirculatory asthenia unless mild, are enumerated as disqualifying diseases.

Table II

Accepted	166	36%
Rejected	294	64%
Rejected 294 — % of total rejected		
Essential Hypertension	58	(20%)
Rheumatic Heart Disease	137	(46%)
N.C.A.	58	(20%)
Miscellaneous	41	(14%)
Classification of Rejected inductees		
IB	93	(32%) of total
IV	201	(68%) of total

Bourne[5] states that the commonest cause of cardiovascular break-down under the strain of service is neurocirculatory asthenia, however the opinions expressed by both cardiologists and psychiatrists show the extent of the disagreement as to the nature of this syndrome. White[6] adds that "neurocirculatory asthenia is not established as yet primarily as a psychoneurosis. A cardiac neurosis may be present with none of the evidence of neurocirculatory asthenia." He further states that a more accurate designation such as psychoneurosis with neurocirculatory asthenia, or the preponderant condition should be so designated. Lewis[1] in using the term "effort syndrome" pointed out that this term does not imply disease, but rather represents a series of symptoms found in many different states. Even in his second edition of the "Soldier's Heart and Effort Syndrome," Lewis carefully avoids definition by a careful recital of the symptoms and findings in this syndrome. Kilgore[7] states, "The disturbance is of a general nature and not a reflection of real heart disease, however such symptoms referred to the heart may predominate." Ebaugh[8], a psychiatrist, recommends that such terms as neurocirculatory asthenia and all other terms that implicate a part of the body when it is only participating in a personality reaction, be deleted from medical terminology.

The syndrome of neurocirculatory asthenia is characterized by a group of symptoms (Table III) as follows: breathlessness, easy fatigue, precordial pain, palpitation, headache, faintness, giddiness. All these or any combination of these may be complained of by a victim of neurocirculatory asthenia. On physical examination these individuals have a poor nutritional state, have flabby muscles and poor posture.

Table III

Usual Symptoms and Signs in N.C.A.
Easy fatigue
Heartconsciousness
Palpitation
Faintness
Giddiness
Praecordial Pain
Tachycardia
Profuse sweating (axilla and upper lip)
Tremor of fingers
Cold clammy hands
Cyanosis of finger tips
Dermographia
In general, poor posture, poor nutritional state, Flabby muscles.

Excessive sweating of the hands, of the axilla, and of the upper lip is noted even when they are examined in a cold room. Their cold hands are peculiarly bluish in addition to the greasy sweat which covers them and tremor of the fingers is common. Dermographia is frequently present. The pulse rate is rapid varying between ninety and one hundred an thirty. The blood pressure is labile and in our group varied from normal to one hundred and seventy. As noted in Table IV, these patients were referred to us with a variety of diagnoses; thyrotoxicosis 12, tuberculosis 1, anxiety neurosis 2, emotional instability 2, tachycardia with hypertension 19, tachycardia 25, questionable systolic and presystolic murmurs and arrhythmia 46. In deference to the local boards who referred these patients, the differential diagnosis was not easy to make in a hurried check up without any laboratory criteria on which to base conclusions. Our standard check up for the group included a basal metabolic test, an electrocardiogram, two metre plate and frequent re-examinations, three being the maximum.

Table IV

Neurocirculatory Asthenia	107	
Accepted 58	(54%)	
Rejected 49	(46%)	
Diagnoses from Local Boards		
Thyrotoxicosis	12	
Tuberculosis	1	
Anxiety neurosis	2	
Emotional instability	2	
Tachycardia with hypertension	19	
Tachycardia	25	
Systolic murmurs?	)	
Presystolic murmurs?	)	46
Arrhythmia	)	
Angina	)	

Investigation of the high basal rates reported in some cases revealed that these individuals, either drank, smoked or ate breakfast prior to the test. Obviously such tests were worthless, yet we could not get authority to hospitalize them on the night previous so that such errors could be avoided. The electrocardiogram helped us little as no serious deviation from normal was noted in the group. Probably the frequent check up under conditions to which the draftee had become accustomed helped us much more to arrive at final decisions. The criteria for heart murmurs as used in organic heart disease was used here. As shown in Table IV, 49 or 54% of the group were accepted as fit for duty while 58 or (46%) were rejected as unfit. Of the rejected group, 25 or (43%) were classified 1B and 33 or (57%) were disqualified as unfit for military service.

What is the record of such men inducted into the army? The following table V from Lewis[1] gives a survey of 600 soldiers with neurocirculatory asthenia after a period of five years from their army discharge. Fifty-six per cent of the group remained stationery, three per cent were worse, while only 15.3 per cent were considered physically fit, or rather, remained in a state of imperfect health without developing any serious disease. They were able to return to civil life

Table V

After-histories (after Grant) of "effort syndrome" cases returning to civil life after the Great War. State after 5 years. Percentage figures

Groups	No. of cases	Fit	Improved	Stationary	Worse	Incidence of serious disease	Dead
No cardiac signs	266	16-9	15-4	57-2	2-6	10-1	2-3
Apical systolic murmur non-conducted	208	14-4	19-7	53-4	4-8	10-1	1-9
Loud apical systolic murmur conducted to axilla	25	16-0	16-0	68-0	0-0	1-0	0-0
Basal systolic murmur	79	13-9	22-8	55-7	2-5	11-3	0-0
Impulse diffuse	71	15-5	19-7	52-2	5-6	8-5	4-2
Whole group	601	15-3	17-8	56-2	3-2	8-7	2-3

and their previous occupations. If these men had been rejected in the beginning, they could have been kept home in useful employment, and would have saved the Government millions in pensions.

The care with which physical examinations have been carried out thus far, it is hoped, has and will eliminate many of the mistakes of the last war. Reports from England and this country clearly indicate that this is true. However should such individuals be inducted into the armed forces of this country, it might be well to assume the English attitude toward them and regard them as patients with a fatigue syndrome without consulting either the cardiologist or the psychiatrist thus avoiding over emphasis of the heart or the mental state. This is in contrast to the attitude[9] adopted in Germany where these anxiety neuroses are considered cowards and are forced to do manual labor in the forward area within sound of the large guns.

COMMENT:

Dr. White states that "It is of primary importance to learn far better than we now know the range of the normal heart as to size, sounds, action, roentgen picture and electrocardiogram; second, to decide what minor abnormalities may be safely passed for military service; third, to detect at their very beginning lesions of the heart and aorta, especially acute rheumatic and syphilitic aortitis; fourth, what newly acquired lesions or symptoms and signs are compatible with military life, and in what capacity."

This brief but comprehensive statement includes everything we should like to have added in our comment on the subject of the cardiovascular system of the prospective soldier.

CONCLUSIONS

1. Under the careful system of check-up adopted by our Advisory Board, it is probable that few errors were made in the group with organic heart disease.

2. The border line cases still offered a challenge to our diagnostic ability in spite of all the data available, including radiographic and electrocardiographic studies. We could not feel certain about the classification of some of this group and therefore adopted "re-examination in six months," as an alternative.

3. The candidate with neurocirculatory asthenia presented a problem in deciding his status with reference to the degree of the affliction in his particular case. It seems probable that this and other questions will be answered in the studies of the future. For the present, we must be guided by the experience of the last war, which clearly indicates that all such individuals should be kept at home at their peace time occupations.

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NEUROCIRCULATORY DISEASE IN THE SOLDIER

HARRY A. DURKIN, M.D.
PEORIA

Cardiovascular disturbances have always constituted one of the major problems of war. In the last war they were one-fourth as common as wounds, and with chest diseases and the psychoneuroses they accounted for the major proportion of medical ailments. History will repeat itself in this as in other respects, and the medical profession is again faced with the challenge of conserving manpower and reducing the post war economic and social nightmare of pensionaries.

The problem is comparatively simple as far as organic heart disease is concerned. The advances in cardiology have been so great that the average doctor of today has a better understanding of organic heart disease than his confreres of twenty-five years ago. Therefore, the

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present war should show a much lower incidence of organic disabilities — both during its progress and after its termination.

There is another condition, however, which has nothing to do with organic pathology, and which in the last war accounted for five out of six cases of temporary and permanent cardiac disability. This disorder was labelled as "Soldiers' Heart" during our Civil War, and as "Effort Syndrome" by the British, and "Neuro-Circulatory Asthenia" by the Americans during the last war. It is the subject of the present discussion.

At the outset it should be emphasized that it is not peculiar to war. It is not uncommon in peace time, but it is intensely aggravated — and therefore manifests itself much more dramatically — under the emotional and physical exigencies of combat.

The symptomatology is essentially the same as that which is exhibited by a normal individual when he undergoes excessive physical or emotional stress. The only difference lies in the ease with which the symptoms are produced — and herein lies the kernel of the whole situation. The victim of effort syndrome has a more sensitive trigger mechanism, develops symptoms on less provocation, and to an exaggerated degree.

In the full blown case, there is breathlessness which is characterized by a respiratory rate of 40 to 60. The accessory muscles of respiration are called into play, facial muscles express distress, the ala nasi dilate, and the skin becomes pale or dusky. Palpitation or heart consciousness may be extreme, and the heart rate may reach 150 or more. Praecordial pain is frequent. It may vary in character from a dull ache or jabs of lightning-like pain to a compressive pain with radiation to the arm and neck simulating the anginal syndrome. Other symptoms are giddiness, excessive fatigue, coarse tremors of the extremities, sweating, and occasionally attacks of syncope. The blood pressure, especially the systolic, is usually elevated, sometimes to a marked degree.

It is obvious that the individual who presents this picture is unfit for military service. As a corollary it is evident that it is incumbent upon the medical department to reject the potential cases before induction, to eliminate those individuals who develop the condition during training, and to treat those who become its victims after a period of actual soldiering.

The present discussion is confined to the problem of recognizing the potential cases and their elimination by examining boards. This problem is at the same time important and difficult. Its importance is evidenced by the fact that nearly one-half the cases in the last war showed symptoms before their induction. Their elimination would have saved millions of dollars and a tremendous wastage of human suffering and man power. Its difficulty lies in the facts that the nature of the disorder is poorly understood, and in the impossibility of laying down any entirely adequate formulae for its recognition. The compleat examiner must be gifted with an insight into psycho-somatic medicine, an ability to deal in intangibles, and a certan clairvoyancy which will enable him to visualize the future reactions of the inductee. There is no such an examiner.

Notwithstanding the impossibility of an entirely adequate solution, it should be possible to improve upon the situation which existed during the last war. This may be accomplished by considering the etiological factors involved and in this way delineating certain etiological groupings.

The first group consists of perfectly normal individuals who eventually break under the strain of prolonged service. Modern war — entailing as it does strenuous exertion, inadequate rest, loss of sleep, exposure to the elements, changes in diet, and above all a tremendous strain on the nervous system — is bound to wreck even the most sturdy. We must accept this type of break-down as inevitable.

A second group comprises those who are just as normal but whose reserve power has been weakened by some infection — whether it be pneumonia, influenza, tonsillitis, trench fever, or dysentery. If, because of the exigencies of war, these men are returned to duty too soon, they will break under even moderate strain. In the last war, 50% of the cases of neurocirculatory asthenia which developed during service gave a history of infection. The solution would seem to lie in affording a period of convalescence which is sufficient to effect a restoration to health.

The third group exhibits certain characteristics which warrant the assumption that its members will develop symptoms on slight to moderate strain. These individuals exhibit signs of constitutional inferiority, either physical or nervous. On the physical side, they are poorly developed, visceroptotic, narrow or flat-chested, and generally delicate. The majority — often from physical necessity — have engaged in sedentary occupations during civil life, and have taken but little exercise. While a certain proportion may build up a physical reserve during the period of training, they as a rule will not stand the rigors of unlimited military service. On the nervous side, they are easily excited, highly strung, over-sensitive, tend to blush, and perspire easily. Many of them give a history of night terrors, bed-wetting, and sleep walking in childhood, and of phobias during adult life. Others are hypochondriacal, self-centered, introspective and timid. Tachycardia, tremulousness, and hypertension develop on slight provocation. They are not adjustable to the stress and emotional conflicts which modern warfare imposes.

Inasmuch as groups one and two must be accepted as inevitable, the sole hope in reducing the incidence of this disturbance is dependent upon the careful scrutiny of those individuals who fall into group three. In other words the constitutional status is the only factor over which the examiners can exercise any control.

While a sizable proportion can be climinated during the routine examination of draftees, there will remain a large residue of potential cases which will develop symptoms during the period of training. Hence the importance of a careful follow-up system which will extend to the training camps. During the last war, approximately 20% of all cases were invalided during the training period.

The success of this rather prolonged weeding out process will depend in large part upon the alertness of the average medical officer. While the cardiologists and the psychiatrists have been responsible for the research work, and have been the main contributors to the literature, there are not sufficient numbers of either of them to take care of the many examinations. Furthermore, the disorder is of a general nature — and while it may masquerade as real heart disease or as one of a number of nervous disorders — it does not properly belong to any single specialty. It is a mosaic in which psychologic, autonomic, endocrine, and metabolic factors may be present.

For the time being, therefore, it would seem wise to take a broad view of the problem, and thereby avoid the fixation in the patients or the doctors mind of any cardiac or psychoneurotic inferiority. In other words, it should be regarded as a general fatigue state with cardiac or nervous manifestations either of which may predominate in a given case.

This type of approach would make the examining boards and the general medical officers more conscious of the situation and facilitate the early detection of milder cases. The cardiologist and the psychiatrist should serve in the capacities of consultants or advisors as to the disposition of individual cases.

Sir Thomas Lewis[1], who contributed much to the study of Effort Syndrome during the last war, has stated that 55% developed symptoms before joining, or during training. He places the fault upon the recruiting boards because they failed to realize that the stethoscope alone will not determine physical fitness. In his opinion a man's capacity for work is ascertained by putting him to work and watching his reaction. He believes that had the examinations been conducted by instructors in physical training on a parade ground, they would have been more efficient.

These conclusions are based on the premise that the examinee presents no clear signs of organic heart disease or any of the easily detectable evidences of constitutional nervous inferiority. As a corollary he insists upon the value of test exercises before induction and the follow-up observation during the more rigorous period of training. He feels that exercise tests are neglected for two reasons: first, because their value is not appreciated; and second, because they are thought to consume too much time. The amount of time which can be spent profitably can be settled only by considering the cost to the man and the nation in failing to eliminate the unfit.

A series of exercise tests conducted by suitable non-commissioned officers on many men at a time would screen out many of the actually and potentially unfit, and facilitate their careful

attention at the hands of medical advisors. He concluded that some such method is essential to sound recruiting.

The direct antithesis to this method of approach is the attitude of many of the present American examining boards. In some of these there is a tendency for the internists to confine themselves to the detection of organic heart disease, and to allow the psychiatrists to dispose of the functional cases. The latter tend to eliminate entirely the concept of neuro-circulatory asthenia and to attach the label of neurasthenia or anxiety neurosis. By doing so they confuse the issue and destroy the broad approach which has been stressed in the early part of this paper.

A psychoneurotic does not necessarily exhibit the symptoms of neuro-circulatory asthenia, nor is the victim of the latter condition always a psychoneurotic. The importance of a clarity of distinction between these conditions has been emphasized by Paul White.[2] He writes: "If there is a psychoneurosis with symptoms of neurocirculatory asthenia, both conditions should be stated to be present, with the emphasis on the one which is preponderant; if only one of the two conditions is present, the correct designation should be given. Neurocirculatory Asthenia should not yet be called a psychoneurosis, or vice versa. It is hoped in the future to have a clearer understanding of their relationship."

The wisdom of this distinction becomes evident when one takes a long range view of the problem. While the psychiatrist, by virtue of his sixth sense in sizing up the emotionally unfit, is very effective in the elimination of a large group which presents a nervous heredity, and a history of maladjustments to the vicissitudes of ordinary living, he is bound to miss a group of the purely physically unfit. This group should properly be assayed by the more organically minded examiner. These men are more difficult to evaluate — and a majority are inducted.

A careful scrutiny of their reactions during training is imperative, and this scrutiny devolves upon the general medical officer and also upon the non-medical officer who observes the reactions of the trainee to severe physical exertion.

All theoretical considerations aside, it has been necessary for the war department to issue certain regulations to examining centers. These are covered in Mobilization Regulations (M R 1-9), and the boards are instructed to accept or reject a man in accordance with these regulations. There is no middle road. The criteria for rejection are listed under Par. 57. They include: Pulse rates over 100 which do not subside with rest. Rapid rates which are due to temporary excitement or nervousness will usually subside after an hour of recumbency. These individuals may be accepted. Initial rates of 130 rarely return to normal, and therefore it is a waste of time and effort to hold these men over for further examination.

The regulations re B-P. state that a persistent reading of 150/90 at rest is a cause for rejection unless the increased pressure is due to psychic reaction or secondary to renal or systemic disease. A reading is regarded as "persistent" when it is sustained at a high level in spite of adequate rest and the distraction of repeated examinations.

Altho a strict adherence to these formulae may result in the rejection of a certain number of men who might subsequently make a satisfactory adjustment to military life, it will weed out a majority of the absolutely unfit.

When supplemented by a survey of the general physical and nervous constitution as determined by a brief inquiry into the past history, and a search for the presence of the stigmata of physical and nervous inferiority as previously outlined, they furnish the best criteria which are presently available. By eliminating those who are constitutionally unfit for peace time pursuits, this method of approach will forestall many of the breakdowns of war.

Unfortunately the problem does not end here. Many borderline cases will and should be inducted. During the training period these men will be subjected to the necessity of making a radical, mental, emotional, and physical adjustment to a new environment. Many of them will develop evidence of nervous or physical inadequacy. It would seem wise to discharge the nervously inadequate without further ado. The individual who breaks down nervously during the comparatively safe training period will never make a good soldier — even as a noncombatant. The army is better off without him.

Those who are physically below par present an entirely different problem. Most of them are

recruited from the white-collar class and have led sedentary lives. They are psychologically normal. The spirit is willing, but the flesh is weak. Many of them can be rehabilitated to a plane where they will be valuable in one of the many necessary branches of limited service. They should be put on a less concentrated training regime and subjected to a process of hardening which is proportioned to their physical limitations.

The importance of careful team work on the part of medical officers, line officers, and drill instructors during the training period cannot be over-emphasized. An intelligent appraisal of the physical and emotional reactions of the trainee is the only sure method of eliminating the borderline cases. It is a difficult and time-consuming process, but it will pay large dividends in military efficiency, conservation of man power, and governmental economy in the immediate and distant future.

CONCLUSION

The syndrome of Neurocirculatory Asthenia is one of the most challenging problems of war. The exact mechanisms involved are poorly understood, and its development is conditioned by the interplay of many varied factors. In its essence it is a product of a physical or nervous strain which is beyond the limitations of the affected individual. It belongs neither to the cardiologist or to the psychiatrist except from a theoretical standpoint. For the time being, it would seem wise to consider it as a broad problem of unfitness, and thereby enlist the cooperation of general medical and non-medical personnel in its early detection.

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When you have made an observation of value or reached a conclusion concerning the unusual, publish it. Avoid carrying unpublished knowledge to the grave! The three great foes of the physician are ignorance which is sin; apathy, which is the world; and vice which is the devil. —*Sir William Osler.*

INCIDENCE OF PULMONARY TUBERCULOSIS AS DETECTED ROENTGENOLOGICALLY IN A SELECTED GROUP OF INDUCTEES —

EARL E. BARTH, M.D.†
AND
FAY H. SQUIRE, M.D.*
CHICAGO

The value of an adequate roentgenological examination of the chest of all prospective recruits has been emphasized by numerous authors in the past two years. The experience of workers doing survey work in the various sections of the country has shown that physical diagnosis is much less reliable than roentgenography in the detection of tuberculosis. A thorough roentgenological study of the chest is universally recognized as the most trustworthy means of detecting pulmonary tuberculosis. Plunkett[1] has emphasized the fact that tuberculosis still remains second in importance as a cause of death in the group 20 to 34 years of age, while the highest incidence of morbidity from tuberculosis is in individuals 15 to 29 years of age. The great majority of men inducted into military service to date are in this age group.

It has been estimated that tuberculosis in general represents about one-fourth of the total amount paid for medical disabilities in the last war. Spillman[2] estimated in 1940 that "tuberculosis during and after the World War has cost approximately $960,000,000 to date in compensation, vocational training, insurance and hospitalization." The tuberculosis problem of World War I and in the present mobilization has been discussed at length by Pollock[3] who reports that the cost of tuberculosis since the last war has been approximately $1,000,000,000, with a monthly cost in the year 1941 of approximately $3,000,000. The estimated cost of each individual developing tuberculosis in the last war has been $10,000 plus $50 per month or about $30,000 per man. Since we are again confronted with the necessity of a national mobilization of man power it will be well to remember

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†From the Department of Radiology, Northwestern University Medical School.

*From the Department of Radiology, Presbyterian Hospital.

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and profit by the experiences of twenty-five years ago. The lessons learned, supplemented by further knowledge acquired in the past quarter of a century, should be applied as far as the tuberculosis problem is concerned.

The importance of a routine chest roentgenogram for prospective recruits was realized by the medical personnel of both the Army and the Navy at the outset. At the beginning of the mobilization period adequate x-ray equipment was not available for all of the induction centers scattered throughout the United States. Both the Army and the Navy have made exhaustive studies of the various roentgenological procedures in use. The Navy has adopted a 35 mm. film for routine chest study. DeLorimer[4,5] has discussed the various methods in detail as to trust for mass studies, co-ordination with other examinations, future reference, unit cost per examination, and initial cost of auxiliary equipment. This evaluation of all the procedures being used in civilian practice led to the official adoption by the Army of the stereoscopic technique using 4x5″ films. Most authorities now feel that the 4x5″ film made stereoscopically is adequate for a survey study and many of the writers feel that it is more trustworthy than a single 14x17″ roentgenogram. The unit cost per examination for a 4x5″ stereoscopic study is approximately 10 to 12 cents as compared to 54 cents for the 14x17″ film and $1.08 for the stereoscopic pair of 14x17″ films. Filing of the smaller film for future reference becomes much less a problem than the more bulky conventional 14x17″ film. It is universally agreed that whatever the cost of the examination, it is justified in view of the experience with this problem in the last World War.

This paper will be concerned with the discussion of the incidence of tuberculosis in a selected group of inductees. Since the Chicago Army Induction Center was not equipped to carry out these roentgen examinations when the induction of selectees began (November 18, 1940), arrangements were made with Northwestern University Medical School for this work. Not a sufficient amount of equipment was available at this institution to examine all of the inductees and hence certain criteria were used for the selection of the men to be examined rontgenologically. These criteria consisted of recent loss of weight, underweight, family or personal history of exposure, and abnormal physical findings. The examination consisted of a single postero-anterior 14x17″ film of the thorax. If questionable findings were noted and a further study was indicated, the recruit was returned for fluoroscopy, and in several instances, stereoscopic and lateral films. In an effort to co-operate with the examining physicians and not retard the flow of registrants through the Induction Center, all films were interpreted in the dark room before drying.

In March, 1941, it became necessary to move the Induction Center to a larger Armory on the west side and a similar arrangement for roentgen examinations was made with Presbyterian Hospital. This arrangement continued until July 31, 1941 when a photo-roentgen unit was installed at the Induction Center. It should be emphasized again that we examined only that group of inductees referred to us by the physicians on the Induction Board. It should be noted further that because of the lack of facilities and equipment during the early months of the induction of selectees, a large number of men throughout the country, estimated to be about half of the men inducted, did not have a roentgen examination of the chest. Undoubtedly among this group are many men with either minimal or more advanced tuberculosis who will be discovered to have tuberculosis at a later date and will become beneficiaries of the Government for disease supposedly contracted while in Service. It is our understanding that equipment has been supplied to all Induction Centers in recent months and that the chests of all inductees are examined roentgenologically.

All of the roentgenograms made of the chest of this selected group of inductees were interpreted by the authors. The United States Army Regulation MR1-9 Standard of Physical Examination was followed in the interpretation.

From November 18, 1940 to July 31, 1941, 3,634 inductees were examined at the two institutions. The men examined came from all sections of the State of Illinois. Of this group, 2,414 or 66.4% were found to have no roentgen evidence of tuberculosis. A number of men, however, in this group had roentgen evidence of other primary disqualifying lesions. Calcareous deposits either in the parenchyma or the lymph nodes, or both, were found in 1,157

INCIDENCE OF PULMONARY TUBERCULOSIS IN A SELECTED GROUP OF 3,634 INDUCTEES EXAMINED ROENTGENOLOGICALLY FOR UNITED STATES ARMY.

Diagnosis	Number Examined	Per Cent
Negative (no evidence of tuberculosis	2,414	66.4
Calcium deposits in parenchyma and/or lymph nodes	1,157	31.9
Tuberculosis, active	63	1.7
TOTAL	3,634	100.0

men or 31.9%. These calcareous deposits varied in size and number as well as in distribution. In some instances the number or the size of the calcareous deposits disqualified the man for military service. Lesions having the characteristic roentgen appearance of active tuberculosis were found in 63 men, or 1.7%. In this group were included minimal tuberculosis, lesions in excess of minimal, moderately advanced, far advanced with and without cavities. As would be expected these lesions varied in size, some of them being coin-shaped, others having a soft pneumonic appearance, but all of the lesions having the characteristics which one associates with active pulmonary tuberculosis. The percentage of rejections for tuberculosis during this period of time will not correspond with the figures given for active pulmonary tuberculosis, as undoubtedly some of the men with extensive calcareous deposits were rejected because the number or the size of these deposits was greater than the Army regulations permit. We do not have at our disposal the exact number of rejections during this period of time.

There has appeared in the literature during the past few months a number of articles dealing with the incidence of pulmonary tuberculosis in inductees and National Guardsmen. Edwards and Ehrlich,[6] in a report of the roentgen findings of 41,809 inductees and 9,541 National Guardsmen in New York City, detected 561 men with pulmonary tuberculosis or a percentage of approximately 1.1%. Of 14,923 inductees examined in Buffalo, Syracuse and Albany, New York, Plunkett[1] states that .9% were disqualified for military service because of roentgen evidence of tuberculosis. In a group of 11,870 inductees and National Guardsmen in Baltimore, Maryland, Ashbury[7] found that 1.2% were rejected because of pulmonary tuberculosis. Reynolds[8] reports on the experience in Pennsylvania in a group of 51,131 inductees, of which 1,169 or 2.12% had pulmonary tuberculosis and were rejected. It will be noted that the percentage reported in this paper is somewhat higher than those given elsewhere but it should be borne in mind that the men examined were referred to us because x-ray examination appeared to be indicated. Routine roentgen examinations of all inductees were not made during this period.

It becomes quite evident from a review of the literature that a thorough routine roentgenographic examination of the cest of each inductee is essential if the tremendous expenditure for tuberculosis in the last World War is to be avoided. In addition to the immediate value for military purposes, routine pre-induction roentgenography of the chest becomes an effective measure in promoting both personal and public health. By this means a great number of men having minimal tuberculosis will be detected and can be adequately treated, thus protecting the public in general and saving the individual a prolonged period of disability by preventing progress of the lesion to an advanced state.

SUMMARY

1. A roentgenological study of the chest offers the most trustworthy means of detecting tuberculosis.

2. The importance of a routine roentgenogram of the chest of all prospective recruits has been discussed.

3. The cost of these examinations is justified by the estimated cost of tuberculosis in the last World War.

4. A study of a selected group of 3,634 inductees examined roentgenologically in Chicago revealed 2,414 or 66.4% without evidence of tuberculosis, 1,157 or 31.9% with calcareous deposits in the parenchyma or the lymph nodes, and 63 or 1.7% with roentgen evidence of active pulmonary tuberculosis. The percentage of active pulmonary tuberculosis in this group compares favorably with the percentages reported in the literature.

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NEUROPSYCHIATRIC PROBLEMS OF THE PRESENT WAR

BENJAMIN BOSHES, M.D., Ph.D.
Major, Medical Corps, U. S. Army,
12th General Hospital

One of the most serious problems facing the physician in the last War was neuropsychiatric. Armies of all nations were affected. In July 1918, the situation in the American Army became so acute that General John Pershing cabled: "Prevalence of mental disorders in replacement troops recently received suggests urgent importance of intensive efforts in eliminating mentally unfit from organization of the new draft prior to departure from the United States ..."

It had been found in the personnel who had already been sent abroad, that many were disabled by such gross entities as tabes dorsalis, dementia paralytica, epilepsy, psychoses, psychoneuroses and even imbecility. The great predominance of the psychoneuroses was particularly surprising. Further investigation revealed that in the same body of men, there were soldiers who had been rejected by the neuropsychiatric boards, but they had nevertheless been admitted to the Army.

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To meet the situation in the present war, the Surgeon General prepared Circular Letter No. 19, 1941. Similar subject matter is also to be found in Medical Circular No. 1, 1941, Selective Service System. The letter follows in part:

1. The Surgeon General desires that medical officers examining for voluntary enlistment and selectees for induction be especially alert to detect all persons with deficiency, constitutional psychopathy, pre-psychotic and post-psychotic personality or psychosis and other persons who later may disrupt discipline and morale, retard progressive military training, occupy hospital beds urgently needed for acutely ill patients and finally become an economic burden to the Government.

2. The following information is intended solely as a practical guide, and neuropsychiatrists are enjoined to apply it with discretion and mature judgment.

3. During the period from April 1, 1917, to December 31, 1919, no less than 97,657 patients were admitted to hospitals with neuropsychiatric diseases .... (He then lists some of the cases)

4. The soldier must be looked on as a fighting unit requiring certain limited and definite qualifications. Not all persons are adaptable to restrictions and inhibitions of personal desires and comforts, to deprivation of rest, food or shelter or to the extraordinary demands for prolonged physical and mental activity often imposed by active military service .... The letter concludes with a classification of the more common neuropsychiatric conditions.

To date the government has spent one billion dollars for the neuropsychiatric disorders resulting from the last war. Almost 100,000 men were rendered unfit. It is now estimated that the average cost to the government for each soldier, is $30,000. The ultimate cost will be much larger. Fifty-five percent of all military hospital cases are neuropsychiatric and in any army hospital in the United States or its territories, 25% of the beds are taken up by neuropsychiatric cases.

In working with potential or actual army personnel, the neuropsychiatrist encounters the following categories. We quote Circular Letter No. 19 in part:

(1) *Mental deficiency.* Normal adult mentality is generally estimated at 15 to 16 years. Terman of Leland-Stanford University utilizes 15 years as the divisor in calculating the intelligence quotient on his recently revised Stanford-Binet Form L. intelligence test. The British experience with mental defectives may be summarized thus: "All men with a mental age up to 8 years, 86% of those with a mental age between 8 and 9 years, 33% of those with a mental age of 10 years, and 28% of those with a mental age of 11 years are untrainable. Such people, when put to work on mechanical equipment, promptly get into accidents. They are always reporting for sick call. They are completely unable to use ingenuity." These men are obviously a hazard in the army. While some are valuable as porters and orderlies about the camps, they are more a liability than an asset. One such boy that we tried to keep from joining, enlisted, and was accepted because his appearance was bright. He was continuously in trouble because he could not learn the drill, could not handle a rifle. He was on K.P. most of the time. After going A.W.O.L. twice he was finally released as "mentally defective."

(2) *Psychopathic Personality Disorders:* "Under this heading is placed an ill-defined, more or less heterogeneous group of conditions in which the patients, although they do not suffer from a congenital defect in the intellectual sphere, manifest a definite defect in their ability to profit by experience .... They are unable to respond in an adult social manner to the demands of honesty, truthfulness, decency and consideration of their associates. They are emotionally unstable and not to be depended on; they act impulsively, with poor judgment; they are always in difficulties, have many and various schemes without any logical basis, lack tenacity of purpose, are easily influenced and are often in conflict with the law. They do not take kindly to regimentation .... Such persons have a decided influence on their associates and on the morale of the organization, for they will not conform to organized authority, and they derive much satisfaction from cultivating insubordination in others. Frequently they make a favorable impression, are neat, talk well and well-mannered. In this general group are to be placed many homosexual persons, grotesque and pathologic liars, vagabonds, inadequate and emotionally unstable persons, petty offenders, swindlers, kleptomaniacs, pyromaniacs, alcoholic persons, and likewise those highly irritable and arrogant persons, the so-called pseudoquerulents ("guard-house lawyers") who are forever critical of organized authority and imbued with feelings of abuse and lack of consideration by their fellows."

Some of these get into the army through the efforts of well-meaning but short-sighted judges before whom they appear for some crime, such as tire-stealing or forgery. The judge will say, "I will vacate your sentence if you join the service." Thus, the army acquires a trouble-maker.

(3) *Manic-Depressive Type.* Such a person may be a manic type, a depressive, or both. The first is a busy, high-pressure-salesman personality. Milder forms are called hypomanic. This individual is continuously on the go, off on private missions, due to press of his own activity, and cannot fit into the teamwork, so necessary in a war like this. He is irritable, irrepressible and hard to handle.

The depressive is a melancholy person who slows down because of his psychomotor retardation. He is so blue that he is unable to will action. He becomes disinterested in eating, cannot sleep, loses weight, is tense and very miserable. He feels useless, guilty of some sin, and ultimately becomes suicidal. Many suicides are in this group. Mentality is well retained, and these people often are passed up as feigning a somatic disorder, which in reality is only a symptom of the depressive state. Heredity is important in such cases.

Sometimes the manic-depressive individual may swing from one phase to the other and we speak of the cyclic form of the disease. One such patient of ours recently discharged from the army developed an attack while in the service. He "took command" of the company,

disobeyed superior officers and had to be confined. Later in confinement he quieted down and became very depressed. Then he tried to hang himself. He was discharged to civilian life. When he recovered, he asked, "How did I ever get that way?"

(4) *Psychoneuroses.* This constitutes a large group of individuals who unconsciously convert their anxieties into physical symptoms. Some symptoms are in the autonomic sphere and we see flushing, rapid beating, irritable heart, so-called "soldiers heart" or effort syndrome, "dyspepsia, diarrhea and urinary frequency. Others develop so-called conversion neuroses, hysterical paralyses, aphonia and sensory defects. Recently a boy, after target practice, developed blindness in both eyes. He was discharged with a diagnosis of "Chronic glaucoma" but he cleared up easily with psychotherapy. About nine-tenths of the cases of "heart-disease" in the last war were functional in origin. The symptoms were "psychosomatic" manifestations of emotional drives.

(5) *Schizophrenia.* This in civil life is our most important and most serious mental disorder. It fills our state hospitals. In military life we see everything from the schizoid personality to the full-blown schizophrenia. The former is a brooder who has always been a "loner". He mixes poorly and is suspicious of his fellows. He broods within himself and has a special interpretation for the chance remarks of his fellows. He worries about his past activities.

Under stress and strain such a person usually breaks down into a full-blown case of dementia praecox. He may have delusions, hallucinations and symptoms of persecution or paranoid trends. One such case occurred recently in a brilliant graduate of a Chicago university. He felt that he was being persecuted by his fellows and finally shot off his hand. Now he is a well-developed case of paranoid schizophrenia.

(6) *Chronic Alcoholism.* These men are serious problems in any army. They are pathological liars, unreliable in every way, often paranoid, and when the pressure becomes great, go A.W.O.L. In acute stages they develop hallucinations and delirium tremens. Ultimately they break down physically, mentally and ethically.

(7) *Organic Disorders.* These are named last but list a very important arry of diseases: idiopathic epilepsy, central nervous system syphilis, multiple sclerosis, atrophies, dystrophies and a host of others. Usually they are eliminated in the initial examination, but a certain number get thru or develop while the men are in service. Thus, we have seen cases of brain tumor, syringomyelia, cervical rib, dystrophy, atrophy, heredo-degenerative diseases of different types, etc.

One may raise the question, "How do such persons get into the Army?" Many enlist during peace time. They are drifters and get into the service as a refuge. Others came in during the early rush that overwhelmed the induction stations. Some come thru stations that lacked a neuropsychiatrist, of which there is still a dearth for army work. Even in the best induction centers some neuropsychiatric problems get thru because of the conditions of the examination. The psychiatrist is given 5 to 7 minutes to examine a man. Obviously one can learn little about a man in so short a time, especially in a field where history is so important. In a situation where a miss costs so many thousands of dollars, one would like to have access to a social history on the man. This could be obtained if there were enough social workers, but there are not. Access could be had to the millions of records prepared by social agencies during the depression years. The police blotters and F. B.I. records would also be useful.

It is amazing, however, how much can be accomplished by even a brief examination. The patient is stripped. Absent reflexes, atrophies, nystagmus and Argyll-Robertson pupils are easily discovered. The tremor of the chronic alcoholic or of the patient with multiple sclerosis, or the vasomotor instability of the psychonerurotic is obvious. A few well-placed questions about the inductee's school and work record, his attitude toward any bodily complaints, his opinion in regards to entering the army, or towards leaving home, all throw light on his personality. The question of leaving his family is probably the most important because this more than anything else seems to break down an otherwise stable man. Gillespie, psychiatrist to the R.A.F. has noted that the most

common cause for breakdown in the English forces or civilian population is not bombing but breaking up and dislocation of families.

The government has one safety-valve. If an enlisted man or a commissioned officer, up to six months after induction or order to extended active duty, respectively breaks down, the government is not liable and may return the man for care to the community from which he came. If no such care is available, the soldier may be sent to St. Elizabeth Hospital, Washington, D. C. The government is not liable if the disability can be proved to have existed prior to entry into service. Thus, many individuals who could not stand conditions of actual combat are screened out during the training period.

It is important to remember that all men are not adaptable to the rigid discipline of military life. While the susceptible individual must be weeded out to prevent his breaking down, the army must also be protected from him.

Psychiatric patients break down morale. A program has been worked out, or possibly is already working in some places to care for men who have been rejected for neuropsychiatric reasons. Otherwise many such would become nomads, wandering about with the idea that they are "bugs", as they put it. The rejectee may be useful in industry. The Army now also utilizes men already inducted who are only partially disabled, placing them in new positions after reclassification. Thus, men who are inept as a regular soldier are re-assigned to special training battalions established at replacement training centers, to the end of finding some position into which they may fit. Thus the government is utilizing all available manpower. Individuals with actual nervous and mental disease are discharged from the service.

All in all, considering the magnitude of the problem, the shortage of well-trained neuropsychiatrists, and the brief time in which the task had to be planned and executed, the work has been rather well done. Station hospital neuropsychiatrists are weeding out many that passed thru induction centers. The real test will come when large numbers of troops are subjected to battle conditions. Neuropsychiatric experience from theaters of actual operations, which will probably form the basis of a future paper, will show how effective our program of prophylaxis has been.



THE TREATMENT OF SURGICAL SHOCK

ARKELL M. VAUGHN, M.D., F.A.C.S.
CHICAGO

Shock is a subject which has baffled the surgeons for many years. Its pathogenesis has been and still is the basis of much experimental and clinical research. While many theories have been proposed and many exploded, progress is being made in the solution of the problem.

Clinical traumatic shock, is defined as a circulatory deficiency which is neither cardiac nor vasomotor in origin and is characterized by the following:

1. Decrease in blood volume (oligemia)
2. Reduced cardiac output
3. Diminished blood flow
4. Hemoconcentration
5. Tissue anoxia
6. Capillary congestion
7. Vasoconstriction
8. Decrease in venous pressure
9. Low blood pressure
10. Decreased muscular tone
11. Decreased metabolism
12. Acapnia
13. Acidosis

Shock may be primary or secondary. Primary shock is a condition which develops immediately after an injury; it has a nervous basis, and pain and psychic factors play a role through their effect upon the vascular system.

Secondary, surgical, wound or traumatic shock is that state of general collapse which follows two, three or four hours after severe tissue injury. It is this type of shock which will be discussed in this paper.

Surgical shock may be produced by many conditions, but extremely painful trauma, severe crushing injuries and hemorrhage are the most frequent causes. Hemorrhage may be either "red" or "white". Loss of whole blood either outside the body or within the body cavities is the hemorrhage we are all familiar with and is called "red" hemorrhage. "White" hemorrhage is seen in patients suffering from shock produced by severe burns; it is a leakage of plasma through the capillary bed into the soft tissue and in such a condition it is frequently said that "the patient bled to death into his own tissues". This increased or abnormal permeability of the capillary bed is caused, according to Moon[1], by any type of injury to the endothelial lining of the capillaries, thereby causing increased permeability to plasma colloids. Leakage of plasma from the blood produces hemoconcentration, decreased blood volume, diminished blood flow, reduced cardiac output and finally tissue anoxia which, if uncompensated, will give rise to symptoms of shock eventually leading to death unless the above processes are reversed by appropriate methods of treatment. While Moon very clearly differentiates shock from the effects of hemorrhage, no attempt will be made in this paper to differentiate the two conditions.

The aim of treatment in surgical shock is to reverse or rectify the abnormal processes mentioned above, and to do this the following must be carried out: Replacement of the fluid lost, and prevention of further fluid loss. Harkins[2] has clearly outlined the empiric and specific treatment of shock as follows:

I. *Empiric treatment:*

- a. Rest
- b. Warmth
- c. Elevation of the feet
- d. Tight bandaging of the extremities
- e. Administration of sedatives
- f. Stimulants
- g. Vasospastics

II. *Specific treatment:*

- a. Blood substitutes
  1. Water
  2. Plasma
     Normal, concentrated or diluted
     Dried
     Calcified
  3. Whole blood
  4. Serum
  5. Crystalloids
     Sodium chloride
     Dextrose
     Ringer's solution
     Hartman's solution
     Locke's solution
  6. Acacia
  7. Red cells

From The Department of Surgery, Mercy Hospital and Loyola University School of Medicine, Chicago, Ill.

8. Hemoglobin — Ringer's solution
9. Ascitic fluid

b. Oxygen therapy

c. Adrenal cortical extract

Empiric Treatment — Rest, as in all pathologic conditions, is essential. Sedation in the form of narcotics or preferably the barbiturates may be necessary; however, their intensive administration is to be avoided because of the danger of too marked depression of vital functions, especially so in Shock due to head injury. Warmth is necessary but should not be extreme, especially in patients suffering from shock due to exposure and freezing. Elevation of the feet or lowering of the head allows more blood to reach the respiratory center. On the battlefield this can be accomplished by having the stretcher bearer at the patient's feet put his end of the stretcher on his shoulders while the other bearer carries the head end at arm's length, thus lowering the head. Tight bandaging of the extremities decreases the vascular bed and probably increases the blood volume to the vital centers. This may also prevent "white" hemorrhage or plasma loss through the capillaries in the extremities. Koch and Allen[3] use pressure bandages in severe burn cases, hoping that this pressure will prevent further fluid loss into the tissues. Stimulants should not be used too intensively, especially in shock due to hemorrhage, since their administration might increase the hemorrhage. Warm coffee, or whiskey, if the patient is conscious, are permissible. Vasospastics are merely symptomatic therapeutic agents and if used too freely may actually be harmful. Freeman[4] and others have shown that epinephrine alone will cause shock.

Specific Treatment — Plasma transfusions at the present time seem to hold the spotlight of the specific treatment. It has been stated by Strumia[5] that "there is no emergency condition except carbon monoxide poisoning in which plasma is not as useful as whole blood." The material for transfusions may be prepared in several ways and is dispensed usually as liquid or frozen plasma in civilian practice, and dried or concentrated plasma in military practice. It may be given anywhere without typing, even at the front line first aid stations where it is most needed. According to Blalock[6], serum transfusions are not preferable to plasma. Citrated whole blood in my opinion would be advisable in shock due to hemorrhage where there is profound anemia; in such a case, blood cells and plasma are both lost and whole blood would replace both losses. Water prevents dehydration but is not a complete restorative of blood volume. Crystalloids, as shown by Beard and Blalock[7], may actually do more harm than good if not supplemented by blood or plasma, since they diffuse out through the permeable capillary wall unless there is an adequate amount of plasma protein present in the blood. Acacia was used in World War I but has been supplanted by plasma which is more beneficial and not as dangerous. The other blood substitutes are either experimental or not generally accepted.

For the past year and a half at Mercy Hospital, with the assistance of our surgical resident, Dr. M. McCarthy, some clinical investigation has been carried out on various types of cases subjected to different operative procedures: cell volume determinations with the hematocrit tubes, specific gravity of the plasma or serum, and plasma or serum protein determinations by means of the Kagan-Falling drop proteinometer have been determined in over 50 clinical cases. If the cell volume was considerably below the normal of 45, as is found in cases of secondary hemorrhage, whole blood transfusions were given. If, however, the cell volume is above the normal of 45, as occurs in severe burns, acute pancreatitis and other conditions where there is a hemoconcentration and the plasma protein is below the normal of 7% plasma transfusions have been advised. Furthermore, fluid balance can be more accurately checked by the above determinations and used as a guide to fluid therapy.

Whole blood, plasma or serum can usually be given by intravenous needle, but in severe shock there is a compensatory vasoconstriction so that many times the veins are difficult or impossible to enter. In such cases canalization of the veins may be necessary but even this is sometimes not possible due to thrombosis from previous needling. When this occurs, sternal transfusions in patients over three years of age, as recently reported by Tocantins[8],

may be used as a last resort. Our experience with sternal transfusion has been limited to one case where it was not entirely satisfactory, probably due to our inexperience in its use.

Of the other specific treatments of shock, oxygen therapy is of prime importance. One of the reasons for the irreversibility of the shock syndrome is anoxic damage to the tissues. Early prevention and continued treatment with high oxygen percentages are essential. Schnedorf and Orr[9] have recently shown experimentally the value of oxygen inhalations as an adjunct in the treatment of shock due to hemorrhage. The use of adrenal cortical extract is still in the experimental stage but offers great promise and should be used, in my opinion, as a therapeutic agent, as well as a prophylactic agent. Cole and his associates[10] have recently shown experimentally that this preparation is of definite value prophylactically.

SUMMARY AND CONCLUSIONS

1. A resumé has been given of the current treatment of shock, both empiric and specific.

2. The common empiric treatments have been discussed.

3. Plasma transfusions in liberal amounts rank first in treatment, followed by whole blood transfusions. Crystalloids will not supplant plasma or whole blood but are valuable adjuncts.

4. Oxygen inhalations and adrenal cortical extracts are valuable adjuncts both as a prophylaxis and as a treatment of shock.

5. The value of the hematocrit, specific gravity of plasma or serum, and plasma protein determinations has been discussed.

6. The use of sternal transfusions has been mentioned when other methods of intravenous therapy have failed.

1180 East 63rd Street

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DISCUSSION

Dr. John L. Keeley, Chicago: Dr. Vaughn's presentation has left very little to be said about the treatment of shock. I know of nothing in the accepted treatment at the present time that has been omitted from his discussion. The one point upon which everybody agrees is that the essential feature of secondary shock is the disparity between the total circulating blood volume and the capacity of the cardiovascular system. As a result of anoxia fluid is lost from the blood stream into the tissues. This loss is progressive and, as Dr. Vaughn pointed out, leads to a considerable degree of hemoconcentration. This can be demonstrated by a study of serial samples of blood. We are thus able to note the hemoconcentration and anticipate the onset of shock. As the total circulating blood volume decreases vasoconstriction becomes more marked and in this way adequate pressure is maintained for a period of several hours. When vasoconstriction is no longer able to compensate for the decreasing blood volume, the blood pressure falls, the pulse rises and the patient develops the typical shock picture. We may therefore speak of compensated and uncompensated shock, as pointed out by Cannon more than twenty years ago.

If we would consider the patient's general condition and the type and severity of trauma, whether operative or accidental, we would be able to select those patients who are liable to develop shock and treat them early. As Dr. Vaughn mentioned, experimental work has been

carried out in various types of cases such as ruptured peptic ulcer, pancreatitis and peritonitis and the necessity of plasma transfusions in these states has been shown. We must remember that the most important point in the treatment of shock is to restore the normal relationship between the circulating blood volume and the capacity of the cardiovascular system.

BURNS TREATED BY PAPER TISSUE — COD LIVER OIL OINTMENT DRESSING AFTER SURGICAL CLEANSING

GEORGE B. CALLAHAN, M. D.
WAUKEGAN

Burns in Peacetime are fourth in our casualty lists. Burns in Wartime of our modern type become first in our casualty list. My friends and nearby neighbors, Naval Medical Officers, have on two occasions remarked data which our medical literature has already told you. Pearl Harbor casualties were burns in sixty per cent and the hospital admissions for burns forty per cent of their totals. Military and civilian casualties likewise run high judging from British literature.

In view of these major numbers our attention must be directed to treatment made available in major materiel and personnel. Therefore, let our technique be major in its exactness and thoroughness in so far as conditions permit. To a medical person technique at once brings to mind cleanliness and skilfulness practiced, maintained everywhere, under every circumstance. Materials and measures available will vary. To strive for cleanliness and skilfulness will not vary. The words major and majority imply important and the largest number. Therefore, burns which are so important in their number and severity of occurrences must be treated by the largest number of persons in a manner so simple, so gentle, so safe that the greatest good will reach the greatest number. In our battle against burns and their complications, let our measures be for the "mostest men — fustest" to borrow words from a fighting officer for other fighting officers and men as well as for those not in the armed forces.

Today any peacetime development one may make available to our fellow workers in the armed services as well as in defense or civilian services may serve where and when most needed. Hence, it is a source of humble pride and appreciation that I know these simple procedures and supplies about which I am to talk to you are being placed in readiness at sea, at land posts, within and without the armed branches. For such information, I am deeply grateful.

In a former paper the writer[1] used this statement: A burn surgically clean from soapy water, sterile water cleansing, dried, covered with cod liver oil ointment direct, this covered by a single layer paper tissue, redressed a minimal number of times, kept in daily motion will heal with no infection, a minimum of pain and scar.

To this may I add: An infected burn cleansed freely with soapy water, sterile water and debridement, dried, covered by cod liver oil ointment direct, this covered by single layer paper tissue, redressed daily, then less frequently as required, kept in daily motion will heal in a minimum time with a minimum of pain and scar without contracture. In either division any other good surgical measure may be used except the surface medicament and its paper tissue covering are the only dressing.

Basically a burn is like its kindred wounds caused by any measure or material, namely, tissue (or tissues) has (or have) been injured or destroyed and must be treated, nurtured and replaced by that solitary source — the blood. Consequently, the smaller the job the more efficiently and rapidly the task of healing is accomplished. Then to prevent infection thereby lifting a great load of transportation as well as segregation of supplies by vascular demands will release the main lines and their branches of circulation for other food and reconstruction requirements. We have long cleansed our other wounds surgically. Likewise, we have long closed our other wounds surgically where possible. Practiced with gentleness those two measures led to ready healing in almost all cases of clean wounds and many even though contaminated, even infected were watched to early healing. It is said by some that Davidson's[2] greatest contribution to Burn Therapy was he

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taught us to close surfaces. Still others: 'that he taught us to give sufficient attention to burns.' That no one has taught us sufficiently or emphatically enough to cleanse these burns before they are closed and to keep them clean and closed is evident in our literature of the phrases "result of a deep burn and the infection which has invariably followed it," "lesion bathed in virulent pus," "drill the eschar to find the infected area beneath," "transparent eschar to better see the infected areas," "burns — cast — all infected," etc. Therefore, I preface my description of measures with a plea put in the mouth of Pasteur and dramatized recently in "The Life of Pasteur" (cinema) when he sought the accoucheur about to deliver his daughter that he wash his hands and boil supplies used. Pasteur knew that famous flask of broth with capillary opening has borne out the facts that contact carried contamination. Not so much the air borne trouble makers, though Canadian observers have recently pointed to ward contamination by air, we know most is by contact as the source of extension. So it is when we cover by eschar or any other seal, be it ointment or otherwise, the area burned may well be sterile from heat or other causative agent but its periphery has been only partially cooked, or not at all. Therefore, to cover the two areas beneath the same blanket without cleansing will be like covering an abdomen which was cleansed or sterilized only in line of its incision and suture. To be sure some cases of either burn or incision will heal uncleansed and not infected, but our reasoning tells us many will be infected. To this end of emphasis I believe it well we talk and teach of burns as we do of other injuries and have in that way always before us a wound — be it caused by a knife, sliver of wood, a hot metal, steam or otherwise. In eighteen years of teaching it has been my endeavor to keep linked in my students' minds circulation — wounds — burns — other injuries, admonishing them to keep burns all the more clean because they are usually wider wounds, hence more subject to infection. To prepare such for cleansing may require for pain nothing, analgesics, morphia or anesthesia to be used as necessary. It is surgery. Therefore, good surgical measures must be used. To omit any factor, especially cleansing, while using the same nursing care, the same hospital ward, the same medications will give entirely different results, including infection. Blebs are left intact unless they break in cleansing. Less open wound is present. Less tender surface is exposed. Serum under a clean bleb does not become infected and is a cushion conducive to healing, is reabsorbed or spills harmlessly if covering is kept clean. Pain of large blebs before absorption or spontaneous rupture is mild.

The wounds or burn having been cleansed is then closed. For all of us that remains a formidable problem. It is agreed that the more gentle we handle injured or uninjured tissues the better our surgical results. Davidson and thousands before and after him used an eschar with some good and some bad results. Deep scars, contractures, infection difficult to find and the problem of removal of the eschar with or without skin grafting requirements seem four major difficulties. Chemical dyes single or triple have advantages not found in the tannic acid method and yet some similar disadvantages in at least three of those above-mentioned. In the Mid-West especially, the use of nonadherent dressings has been made to close the surfaces with some real advantages over the above two named, I think. Zeiss[3] uses a paraffin spray with soft thin cotton to make a "cast" and removes it daily, sponges away fluid then "recasts" with painless dressings. His results are excellent. His method is not applicable afield, in the home or in many other situations where the exacting fluid, heat and enclosed space requirements are essential. While some motion is permissible, mobility is not as free as in some other dressings. Miller,[4] Koch,[5] Fell,[4] Todd[8] and others of the Cook County Hospital Staff have shown remarkable results in these recent years of restriction especially in Children's Ward to a vaseline fine mesh gauze cast and fixation with pressure splints. Their materials are not unlike the tulle gras of British writers[7] except the latter has more ingredients, hence, becomes more complicated. For one to know Doctor Miller and Doctor Koch in their surgical theatre is at once to think of gentleness and cleanliness in handling wounds or burns. Upon some measures there will be seen differences in the nonadherent dressing I shall describe to you. While cleansing and dressing, I readily use a

general anesthetic if I believe it indicated for pain to give relief of that already present or which may come with gentle yet thorough cleansing. Their "cast" leaves covered large areas until healed or until infection is shown by restlessness, temperature rise, lymphadenopathy, etc., whereupon finding the spot may require removal of complete covering. While the pressure cast prevents fluid accumulation under the dressing some who have used it relate stasis beyond. In this connection I reiterate a reference to Maximow,[8] that dean of Cytologists, who taught us gentleness and cleanliness just as others but in a different manner. In vitro (as in vivo) he[9] showed that tissues bathed in their own fluids not contaminated, healed with rapidity and with minimum fibroblast proliferation in the scar. This included phagocytosis, granulation and epithelization. To this end I have thought of and practiced with a covering that is nonadherent, completely flexible, allows a film of normal fluid freely beneath it, and elevation and daily motion that have prevented and minimumized stasis as well as acting as a prophylactic toward circulatory accidents, thromboses or emboli (Gibbon[10] Fitzgibbon of Dublin; Potts of Chicago[11]). The nonadherence and motions permit growing across the field of granulation or epithelium that will not require stretching or breaking in later therapy.

Technique and progress are so well illustrated in a single case let us look at it. (Colored movies.)

The patient came with hand and fingers infected one week after burns by bicycle cement aflame. Appearance on March 14 shows an ointment cloth dressing used at home. Attention is directed to the flexion deformity this early in the index and midfingers. Now the cleansing with white soap, sterile water, cotton, gauze and nail brush. Debridement by pulling away the necrotic bleb edges was without pain and I did not cut into live or tender tissue. After cleansing, patting dry, covering all surfaces with ointment directly the single paper tissue covers all and separates fingers as shown. Then ambulatory dressing is completed with towel pinned in place. This I offer as a readily applied field or ambulatory dressing for use anywhere. It fits the views of Bunyan[12] even better than his "envelope method," I believe. Cultures on this initial day of treatment revealed hemolytic streptococci from sites all fingers and hand. Healing is at this stage on March 18. Only the base of the index finger and hand showed hemolytic streptococci upon yesterday's cultures. Cultures on the 20th showed no hemolytic streptococci. March 24 progress was at this stage complete filming over all third degree as well as healed second and first degree burns. March 28 dressing of four days and the hand appeared here well healed. April 3 this near final result is seen. End result of pigmentation and scars are herewith shown. Note: No contractures. Other measures known of value in good surgery — morphine, fiuids, glucose, sulfonamides, nutritional attention, etc., were readily used.

Uniformity in therapy is practiced. As you have heard, the writer uses the same early and later treatment whether the case is clean or infected, whatever its causative agent, whatever the extent or degree. The designation as minor or insignificant burn means little until it comes home such as to a father who wrote of the tragic result of a friction burn upon his son's toe "when he went the power and the glory of the Presidency went with him" — Calvin Coolidge.[13]

The availability of supplies is mentioned now. Materials in the care of the infected burn of the hand in two weeks' time when it was well healed would cost retail* at the most: Soap a fraction of a cent; cod liver oil ointment (½ pound) $1.62; paper tissues (20 of a box of 200) a fraction of a cent; sulfanilamide 40c (neoprontosil, if used, $1.50); tongue blades 3c; laundry of 12 towels 24c to make a total of $2.32 (total $3.42 if neoprontosil used.) Costs to a physician or a hospital are lower.

The paper tissues packed in their usual store shelf manner may be safely used, although we feel it consoling to autoclave or flame them. Proof clinically has been found by the author who used them for lesions many years before he autoclaved them and had no infection. Ladies by the millions have used disposable tissues for every cleansing or dressing purpose. In a search of over twenty years' literature only one case of irritation is found and that is ascribed to a

* Average of current prices secured from representative local druggists.

colored variety. From our own hospital research laboratory we have these data:**

Samples from 23 boxes used as they came from shelves of novelty, dry goods and drug stores and hospital containing 10,800 tissues were taken (after packages were left open for 9 days) at different levels from near top to bottom, streaked on blood agar plates and placed in culture tubes. As technique we used the inside of the sheet in smearing. Read through 60 hours incubation results from 108 plates and 12 cultures revealed on plates only 5 growths: 2 Staphylococcus albus, 2 Micrococcus tetragenous, 1 gram negative rods, nonhemolytic. Dextrose broth cultures showed no growths. Therefore, it seems reasonable to conclude that the tissues themselves were sterile except in instances of contamination.

The reason for all these measures mentioned above lies, I believe, in the preparation of paper at the mill where hot vats then hot rollers are the only surfaces in contact with the tissues until folded, packed and then boxed. Entrance of contaminants to the inside surfaces would be very difficult.

Likewise blood agar plates and culture broths with commercial ointments newly opened or those in long use in hospital wards revealed no growths from surfaces or depths of the ointment in either plates or cultures.**

From the laboratory of Doctor William D. McNally[14] the pH of four samples of commercial ointments used by us has been found to be within the limits proposed by Doctor Gifford[15] for buffer solution use in the eye.

Clinical tests by Doctor T. G. Galloway[16] have proven the cod liver oil and high vitamin A ointments kind and healing to eye and nose mucous membrane lesions.

From such data we find the paper tissues and the ointment safe to place and use in the field, upon a ship, in a home, in a hospital, in the Doctor's office. Then may I leave this concluding point with you when cases singly or in large numbers must be treated, utilize the cleaner or detergent at hand. In the field, at sea, when the bombs and gases come to our cities soapy water in buckets or from faucets, oils, ointment itself may be the cleaners. Our line officers are taught such.[17] Our Medical Officers are teaching such.[18] The wound or burn must be clean to prevent infection. Teach the patient to "wash his hands" or even his wounds, if circumstances require, painful though it be it may become his grim duty yet inestimable "ounce of prevention." Let us Doctors do likewise.

** From Department of Medical Technology Saint Therese's Hospital, Waukegan.

CONCLUSIONS

1. A clean burn does not become infected.
2. Paper tissues (preferably white or unbleached) make a gentle, simple, safe dressing for burns or other lesions.
3. Cod liver oil ointment is a valuable adjunct in such a dressing.
4. It can be used with safety in the eye, upon mucous membranes, skin or any injured or uninjured tissue with safety.
5. Any other good surgical procedure should be a part of total therapy.
6. No rupture of a clean bleb is advised.
7. Daily motion of part burned is required.
8. Minimum scars and no contractures have occurred.
9. Materials are readily available, easily transported, not expensive.
10. In surgery we always owe gratitude to our forerunners and associates in laboratory and clinical practices. I herewith sincerely thank all those.

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DISCUSSION

Dr. LeRoy H. Sloan, Chicago: I appreciate the invitation extended to an internist to discuss the therapy of burns. For the last several months we have reviewed the literature on the technic of therapy of burns for the Therapy of Cook County Hospital which we hope will be published some day.

From the literature, within the last 25 years we have gone through several stages, such as the water bath stage in which the child is immersed in either continuously moving water or in lukewarm water in a bath. This technic is found useful particularly soon after the injury, and it is still being used and still has much in its favor as an easy technic in the emergency management of rather diffuse burns. Much of the clothing, for example, can be removed from the child with greater facility in such a bath.

The water bath stage was followed by the open air stage in which the child or adult was placed on a sterile sheet under a cradle covered with a sterile sheet. The degree of heat maintained in such a cradle was frequently so high as to further increase the discomfort of the patient and probably added to the hemoconcentration and shock rather than alleviating them.

In the minds of most of the men here the technic of the late Charles Parker, using adhesive tape frequently to excellent advantage comes to mind. This technic required extreme care and much time and great patience.

Then followed the paraffin technic which was tedious and disturbing to the patient. A modification of the paraffin technic is used at the present time, the paraffin being used in compressive bandages rather than by spray or brush.

Following the paraffin stage and the combinations of the above stages came tannic acid. The attention given to burns following the popularization of this technic by Dr. Davison undoubtedly added greatly to the efficacy of all methods and proved to be superior to many of the previous methods, but its superiority may have been in part due to the greater attention given to the chemistry of the burned patient rather than to the topical application of tannic acid which in the hands of many men produced an eschar which is not too satisfactory and which cannot be used on the face.

Following tannic acid we find the use of other technics, silver nitrate with tannic acid and the like. Lately we have come to a stage which might be termed the baboon stage. Patients are painted with gentian violet, brilliant green, rosaniline until they take on the appearance of some of our well known zoo friends. Perhaps these antiseptics have a place in the therapy of burns. It is likely that such technics will go their way as the others have.

The technic which Dr. Callahan has explained to you is a relatively simple one. The applications are sterile and the disturbance of the patient is minimal. The material used is stimulating to the production of new tissue.

From the literature one learns that the essential therapy of a patient with a severe burn is the therapy of shock. Shock is due to an acute irritation of the nerve endings as well as to hemoconcentration, loss of plasma and the like. Shock is the first thing to be treated rather than the last. A technic which reduces the shock and which supplies the patient with an antiseptic, sterile and easily applied dressing would seem to be of real value.

In addition to the therapy of shock, the debridement of the area under anesthesia is accepted by most of the writers. A compressive fixation bandage has been applied in an attempt in part to retain the medication formerly lost by constant exudation.

From a physiological angle a rise in hemoglobin appears to be an unfavorable sign. A fall in blood pressure is unfavorable. A combination of the two is particularly unfavorable. At the present time the shock of a severe burn is compated by use of plasma if the plasma protein is below normal. More attention is being given to the concentration of the chlorides in the blood. The potassium ion is apt to rise and the sodium ion to become reduced.

As judged from a review of the literature the therapy of burns is first of all a reduction to the minimum of the degree of shock already produced by the burn, the actual therapy of the shock present by anesthesia, sedation, plasma, fluids, and the like. The therapy of the burn itself, using a technic which is sterile, antiseptic and does not disturb the patient greatly and stimulates the production of new tissue. I leave to you surgeons to decide whether Dr. Callahan's technic meets these requirements. It would seem that it does.

Dr. Edwin M. Miller, Chicago: After listening very carefully to this paper and to Dr. Sloan's remarks, I really think there is very little to add to this discussion.

Dr. Callahan has endeavored to bring to us a method which perhaps simplifies the treatment of burns, but I think the chief value of his paper lies in his discussion of the general principles underlying the treatment. If there were only one right method of treatment of burns there would be no need for the use of many different materials. As the years go by, as you know, the number of different things that have been applied to burns is almost countless, and unquestionably the objective may be accomplished sometimes no matter what material is used, provided the general principles of treatment are observed. Having been on the staff of the Cook County Hospital for a long time on the Children's Service naturally I

have come in contact with a large number of burns. During this period of 15 years or so the treatment has changed considerably. We employed for many years the method of Davison, namely, application of tannic acid, and later adopted the modification of Bettman using silver nitrate with it. We have, however, during the past three years given up the use of either of these materials, and have after thorough debridement of the burned areas simply applied sterile vaselin or xeroform dressings, and covered these with copious sterile gauze compresses and left them alone for ten or twelve days. We feel that frequent change of dressings increases the likelihood of bacterial contamination, and we are insistent upon having the patient, the nurse and the doctors wear masks when these large open wounds are exposed.

Splinting of the extremities when the burn is near a joint helps to keep the limb at rest and thus favors the healing process. Grafting of skin is begun as soon as the condition of the patient and the appearance of the granulating areas will allow. While the very extensive use of plasma transfusions has unquestionably been a large factor in reduction of our mortality, I cannot help but feel that this simple method of caring for the burned areas has definitely lowered our incidence of infection and therefore materially improved our results.

Dr. Callahan is to be congratulated on his efforts in simplifying the dressing of a burn, but having had no experience with it myself I am, of course, unable to criticize it further.

Dr. Frank J. Jirka, Chicago; I wish at this time to congratulate Dr. Callahan on his timely and what I consider important paper. Dr. Callahan made a statement that burns are of importance because they have first place in the casualty lists of war time and fourth in peacetime. Burns to us have always been a sort of bete noir. We do not know exactly how to handle them. We used to make a diagnosis of first, second, third degree burns but we did not know how far that third degree burn went. Relative to the pathology, I merely reiterate the statement that Mason and Koch have made, that burns are wide open infected areas. There are many complications of burns and we must anticipate them. The end results depend on the therapy.

Considering these factors there have been many attempts to improve the treatment of burns and to find something that will be a little better than someone else had. We have run the gamut on the treatment of burns from carron oil to open air treatment. I agree with Dr. Miller that many times the open air treatment is good. Now we are down to cod liver oil and sulfanilamide ointment. Back in 1935 the late Dr. Bernard Fantus showed me an article written by Dr. Steele in the London Lancet on the treatment of burns with cod liver oil.

After reading the article he asked me to try that form of treatment but stated that there might be some difficulty in getting crude cod liver oil.

Having treated many burn cases by merely applying the crude cod liver oil on gauze, I was imprressed with the simplicity of its application. There was much relief from pain and a lessening of scar formation.

The only objectionable aspect of the treatment was the smell of the crude cod liver oil. That now has been eliminated in the use of the cod liver oil ointment. I believe, therefore, with my experience in the use of crude cod liver oil and later cod liver oil ointment, that the ointment has its place in the therapy of burns due especially to its simplicity of its application, a lessening of the pain, less severe scaring and quicker healing.

THE DOCTOR AND THE PROBLEM CHILD

PAUL L. SCHROEDER, M.D. AND GEORGE L. PERKINS, M.D.

Institute for Juvenile Research
CHICAGO

The psychiatry of living human relationships, or dynamic psychiatry, has been practiced by physicians even while the medical colleges were content merely to describe insanity and neurotic symptoms. The psychiatry taught was then an arid and static business of pigeon-holing or delineating the extremes of psychosis or neurosis. Psychiatry in practice is actually the art of human relationships as it effects unhappy and emotionally disturbed people. With the advent of dynamic psychiatry, the theory of this art has caught up with the practice. This discussion will concern itself chiefly with the why and wherefore of what we consider to be the best psychiatric practices of general medicine, especially as they relate to the handling of problem children. We do not presume to say what shall or shall not be done in such practice.

The problem child — and how he and his parents might be dealt with — has particularly concerned the medical profession as a whole. For one thing, the family has been a little more prone to bring problems of the child to a family doctor than those of its adults. Indeed, the role of the doctor as a family counsellor in such matters is firmly established. Then too, the practitioner is likely to find the problem child much more refreshing to deal with than the

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adult neurotic. However, the problem parents who may be seen with the disturbed child also presents their difficulties. But it is generally true that it is easier to bring about some change in the mobile, if disturbed child, and to manipulate his environment than it is to change the disturbed adult and his surroundings.

Among problem children we list the feebleminded, who nearly always create some emotional problems in their parents. With years of experience in the handling of the feebleminded child and his family, many practitioners have learned that the parents who bring very retarded children to them, are rarely if ever really unaware of the child's retardation. This does not mean that they can immediately admit this to themselves; but some sort of awareness of the problem usually exists. The practitioner has thus come to learn that his prime function in such situations is not to make the parents intellectually aware of this fact. He has learned that what he must deal with is the emotional disturbance of the parents over the fact that they conceived and have a defective child, who cannot match the capacity of others, and who in no way can live up to their own expectations. The attitude of the public to the feebleminded increases the blow to the self-esteem of the parents. When this emotional disturbance is effectively dealt with the parents are able to accept the facts. The general practitioner has not always been able to verbalize this basic tenet in the handling of the parents of extremely retarded children, but if he has had experience in such matters he has usually proceeded on this assumption.

This, of course, does not mean that it is always possible to reassure parents in the visit or visits which are available for the achievement of this goal. Many parents of such children are finally referred to psychiatrists or child guidance clinics after repeated interviews with one or more doctors during which they have emotionally, and therefore intellectually resisted the acceptance of the facts. In such cases, the psychiatrist or clinic continues the process of reassurance. As is always the case with true reassurance, it consists in giving the parents or patient some relief from their anxiety, tension, or hostility by accepting the expression of their feelings with calmness, without retaliation, and with continued interest. As the feelings of the parents are accepted they are directed against the doctor. But who is a better listener than that doctor who by personality and training has acquired this interest in his patients' problems? Certainly, reassurance does not come about simply with artificial encouragement. Indeed, what experienced practitioner dares speak words of encouragement which are not based on the real facts of the situation or the real capacities of the patients?

Long experience with these cases also has led doctors to raise the question of heredity and transmission of defects with the parents, even when they do not bring it up, in order to relieve the family concerning such matters, when it is possible to do so.

By the same token, the practitioner has learned that the question of whether the defective child should be committed to an institution is a subsidiary one and not the main issue. The disturbed parents are obviously not prepared for such proposals while they are acutely upset and even denying the facts of the case. When the defective child is well trained and not a behavior problem (and such children are capable of acquiring most of the social inhibitions) and when the parents are not disturbed over the child's shortcomings and their own unfulfilled expectations, there is little point in urging institutionalization. Also, the new policy of the Illinois institutions has been to recommend that these children remain in the community.

If the time to mention institutionalization has arrived, the doctor can only tell the parents what the possible advantages which might be gained are; then leave it to the parents to make their own decisions. This is a procedure he has learned for all proposals or suggestions. For most practitioners have realized that when the patient or any other individual can maintain freedom of choice, his independence or resentments need not interfere with his ability to make a decision on the basis of the real issues involved. In such a case he remains a grateful patient or parent, even if he cannot accept the suggestion which the doctor has offered. Nor is the patient's capacity for acceptance of a plan increased by any form of duress or anxiety on the therapist's part that the proposal be accepted.

The dull child, who while not distinctly retarded, still has limitations in general ability as compared to the average child, may also be a problem. In this type of case the psychiatrist likes to have a psychological rating to help him out, though, in the particular case, everyone who has seen the child may have sensed some limitation in intelligence. This child may be difficult to distinguish from the very immature and infantile child who on tests *does* show at least average intelligence. These children usually have difficulty in getting their school work. But here again, the parents may be concerned because they expect results in school and elsewhere, far beyond the youngster's capacities. In this situation too, the disappointments that the child does not fulfill these expectations or cannot achieve the ambitions which belong to the parents, may stand in the way of their acceptance of the child's limitations.

How often has the general practitioner seen an extremely fearful and very inhibited child trail in the office after a parent, only to find that the parent is complaining of the child's aggressiveness and rebelliousness, be it ever so faint. If some such very mild aggressiveness, restlessness or sullenness is not complained about, the mother may be bringing such a child to the doctor because she feels that he is weak, puny, and ill, and by implication, in need of further dependence on and sheltering by her. Yet, the doctor who understands and knows the normally aggressive and happy child will realize the fearful child is an unhappy and disturbed child not because of any rebelliousness, but despite it. He has perhaps also learned that when such parents who complain about their inhibited child's independent acts or mild defiance, are told that they may safely permit this behavior, little is accomplished. He finds that in such cases the parents' fear of their child's annoyances and their anger at, or resistance to his efforts at independence are so much a part of the personality of the parents as to yield little, if at all, to advice or reassurance. It is true that if the mother, for example, does have some capacity for giving her child some independence, comment about her restraining ways may occasionally produce enough guilty feelings so that she will relax in her restrictions and demands for dependence. Or, some comment about a child's need for some freedom may make the mother so angry with the doctor that, although she does not return, she gains some relief from her hostile tensions and can be more relaxed and freer with her child. With this type of parent, it may sometimes seem that the suggestion has brought some change until one has a chance to scrutinize the situation more carefully. One may then discover that while the parent may have relented in her pressure on the child in the matter about which the doctor made his suggestions, she has become all the more inhibiting and insistent in other spheres. But fearful, dependent, and inhibited as this type of mother or father may be, if they can express their anxieties about their children and themselves and eventually their annoyances, over a sufficient period of time they eventually can be benefited by their relationship with the doctor. One day they may come into the office and even tell the doctor quite directly that they are angry with him over something. The therapist will sense that real progress has taken place in this "timid soul."

This change is brought about by the "talking out" which the parent does, during which his feelings also come into play. If the doctor can accept the feelings of the patient calmly and without anger, whatever the emotions expressed be, the patient is encouraged to express more and more of his feelings. Through this process or emotional relationship, changes in the patient's emotional makeup are brought about. However, everyone knows that this is usually a long drawn out process and often for this reason, among others, the parents are referred to a psychiatrist or psychiatric clinic.

The doctor frequently encounters the parent who is concerned about his child's sexual behavior, which is usually masturbation. It thus becomes the physician's task to deal again with concerns of the parent about behavior which is essentially normal. Of course, excessive masturbation in the young child usually arises when the child is very anxious and insecure and has found this way only of allaying some of his discomforts. But when the masturbation is occasional, one is dealing with essentially a natural phenomenon springing from the urges of the child, and the chief effort must then be made with the parent who is concerned about it. As our culture has become more rational in matters of sex, parents, while naturally still dis-

couraging masturbation as an aspect of sexual development which may interfere with the higher, heterosexual level of integration, are not so likely to become concerned about this behavior.

However, the child may be brought to the doctor because this behavior has stirred some similar conflict in the parent or because the parent wishes to gain sanction for further punishment of the child who masturbates. In the latter case, the child is usually being punished not only because this behavior annoys the parent, but because many other actions of the child, which may be defiant and provoking, are producing tensions of frustration in father or mother.

Naturally, if the parent is very disturbed about the masturbation his method of discouraging this behavior will be based on his anxiety rather than on methods which will bring about the inhibitions with the least frustration and anxiety to his child. Here, too, while specific instructions may appear to be accepted they will not solve the parent's problems or end his anxieties. So, the mother who follows strictly the "cook-book" method of bringing up her child because she is afraid of her own natural impulses (including her fears for and annoyance with her child) still is unable to gain relief by this method.

In these cases, too, the doctor has learned that it is invaluable to give the anxious parent a chance to talk about his feelings, either spontaneously or with encouragement. Often this parent will tell you how he was dealt with by his parents in similar situations. The doctor then has some clue as to what the concerns of the parent are and how they arose. The parent who himself was dealt with in a very frustrating manner in the process of training with regard to masturbation, may himself deal with his child in the same fashion. He will do this because he now feels as his father did. Or he may go to the other extreme and be over-indulgent because he sympathizes so much with the child who now feels the way he once did as a youth. When some measure of real relief is obtained by the parent in his relationship with the doctor through his opportunity to express his fears for and annoyances with his child, that parent can proceed to train his child in a less anxious, less punitive, and more consistent way. His manner of training will be determined by methods which are natural for his personality. Then the inhibitions which are established in the child will not be too great. When the child becomes an adult, *acceptable* sexual expression will not be impossible. The control will have come into being without too much upset and pain to the child.

Another set of inhibitions or controls which the parent often becomes concerned about are bowel and bladder training. The practitioner is often called upon to help in situations in which involuntary bowel and bladder control were never established (although the child is older than three) or where they no longer operate even though once established. Chronic constipation of psychogenic origin, which the doctor sometimes finds, may be an example of over-control. A parent who is anxious about such matters may start toilet training at the age of six or eight months instead of at about eighteen months. The child may be given no freedom or leeway during the process. Over-control may be so extreme that the child may, without realizing it, respond with chronic constipation as the only way of not conforming or being defiant.

Far more common is enuresis, which may also develop when the child unknowingly, but definitely, resists this form of toilet training either as a reaction to overstrictness and too much interference (which the organism does not easily tolerate) or because of the inconsistent firmness in training. However, having started as a method whereby the organism may show its independence to undue interference, it may become a way of showing not only independence but unconscious defiance. It may also be a means whereby the child gains some indirect sexual satisfaction, since the passage of the stream through the urethra may be not only relieving and pleasurable, but specifically stimulating to the genitals. Enuresis may also lend itself to or be part of the expression of fear or anxiety, since we know that the experimental animal who shows fear, urinates, among other acts. The various satisfactions or expressions which this one symptom, enuresis, serves, suggests how difficult the cure of enuresis may be even for psychiatrists. But it is not at all unusual for any one emotional symptom to express many kinds of impulse — and conflict.

As in the case of all symptoms, what must be treated is the personality having the enuresis. Of course, if some child is punished severely and often enough, for wetting, he may give up the enuresis because of pain associated. But the disturbed person manifesting the enuresis, as the doctor knows, has not been cured. Occasionally the practitioner suggests the separation of children who sleep together and finds that this is enough to terminate the nocturnal enuresis of one of them. Possibly in this case, any sexual satisfaction or hostile discharge connected with the close contact during wetting, is reduced. As is so common, some relief is usually given to the parent if the practitioner shows, by his way of acting and feeling, that this symptom is not so terrible and so shameful. Sometimes this alone breaks the vicious circle and brings some improvement. At times the symptom disappears and one is at a loss for the reason. Perhaps on those occasions the child has achieved certain freedoms and securities. The doctor knows that in adolescence this outlet for defiance or other feelings often disappears as the growing youth gains greater emancipation from the home and has less need to be defiant. The expression of sexual feelings at this time, may also have something to do with it.

Another nervous symptom is stammering, which may develop when the child has been taught to speak by a strained, anxious, and confused mother who makes her child so tense, while he is learning speech, that the muscles involved are taut, jerky, and poorly coordinated. Early feeding disturbances affecting the oral satisfactions and therefore the mouth and throat coordination and relaxation, may also be a factor here. This symptom, too, the family physician knows, is a symptom which even the psychiatrist has difficulty in helping. Speech training is often used as a palliative. Nervous tics of all kind exist. Some seem to develop because the child has had so many of its avenues of aggression or of annoyance cut off that when frustrated it can only use the very disguised route of the nervous tic to discharge tension or anger.

Acute anxiety is one of the common nervous manifestations with which the practitioner deals. The emotionally disturbed child often fears his own death. It has been definitely established that these arise from his hostilities and the attendant death wishes. However, he becomes very guilty and fears his own death will occur in retaliation. The family doctor has long ago learned from Freud that when the child wishes the death of another he is only wishing that person away and that he does not understand the full implications of death. Phobias are defenses against such fears.

As in all matters of symptoms, the doctor knows that the extent of neurosis or emotional disturbance is not to be gauged by the absence or presence of certain symptoms. As soon as he left medical school, the general physician learned that the classical pictures of neurosis, like the classical descriptions of diseases, rarely occur in children. They are to be found a little more often in adults.

The doctor, who has always been in a good position to observe the interplay between members of the family, has understood, without verbalizing it, that emotional disturbances in children with or without any definite nervous symptoms develop as a result of the frustrations, insecurities, and inconsistencies of his emotional environment. They may have seen the disturbance develop over a long period of time while attending the family. They have thus come to realize that, having taken so long to develop, the situation is complicated and not easily changed. By the same token, they understand that if the attitudes of the parents, who supply the emotional milieu, are changed, the child is also changed in these situations. Similarly, in England it was observed in this war, that if the adults present at the time are calm, the normal child is not disturbed by the bombings even when they occur close by.

Behavior problems are also a way for the child to express his frustrations and the conflicts with himself and with his parents. Defiance of, or hostility toward parents, and then teachers and playmates may take many forms such as, fighting, stealing, refusal to cooperate, etc. Having its origin in the home, it may be inhibited there, but still find opportunity for expression elsewhere. This behavior occurs in response to the persistent depriving attitudes, and repeated annoyances or anxieties of the parents in certain situations which produce great frustration in the children, at such times.

If when the child feels thus markedly frustrated, he is given some outlet for his feelings in some form of behavior such as fighting, provocative acts, or in some behavior of avoidance such as refusal to cooperate, the child develops behavior problems. If the frustrated child has no such outlets he can only develop anxieties, enuresis, night terrors, and other nervous symptoms, or more infantile ways of responding, as a method of relieving his frustrations and gaining further satisfactions. Every doctor knows that the consistently frustrated child usually manifests a combination of these: some nervous symptoms with behavior disturbance also. Just which form of expression, whether behavior or symptoms, or which combinations develop as an expression of the frustrations, usually depends on the kind of personalities which the parents of these children have. The unhappy child of very inhibited parents can rarely permit himself defiant behavior or expressions of annoyance as a way of discharging his frustrations. The child whose unhappiness is expressed in behavior disturbance and temper display is usually the child of parents who themselves are able to express anger or defiant behavior as an outlet for their own emotional disturbances.

Certainly, behavior problems in children generate even more annoyance in these parents, who often have many conflicts and much guilt about expressing further anger toward their children over this behavior.

We thus know that the parents of the child with behavior problems often gain the greatest relief when the doctor encourages and can accept the complaints of these parents about their offspring and even their anger with these children over their unhappiness and disappointments with them, without himself getting upset or encouraging the parents to be more punitive. Indeed the chief job of the psychotherapist is usually to relieve these patients of annoyances which they feel inhibited about expressing, but which they eventually direct against the doctor himself.

It is thus seen that the child who is a behavior problem, like the child with purely nervous symptoms, is an unhappy and disturbed child who can be helped best, not by punishment (which may inhibit the undesirable behavior), but by relieving the anger and frustrations of the parents wherever possible, thus eventually relieving the child's disturbances. Of course, an attempt can also be made, in certain cases, at directly helping the child with his frustration.

We have mentioned how often it was possible for the general practitioner, by helping the parents, to help in the entire situation, including the child and his problems, without the necessity of treating the child directly. When the doctor does interview the child also, to evaluate the situation, he has learned the value of complete privacy in speaking with the child and the importance of respecting his confidences. He has also learned to realize that seeing the child's point of view when he speaks to a child, does not prevent him from understanding the parent's point of view, when they are interviewed. Both have their validity. By being able to sympathize with both in their turn he is in the position to establish a working relationship with either the parent or the child. He thus also avoids the temptation of considering the behavior of either parents or children as an ethical question of right and wrong.

Delinquent children and youth who show persistent stealing or frequent recurrence of some other anti-social behavior are usually not brought to the private practitioner. In the delinquent, training against or inhibition of certain anti-social acts, which otherwise ordinarily develop, has not succeeded. The warmth and the consistent firmness necessary for such training to take place, has not been supplied. We wish to stress the importance of warmth as a necessity although the doctor knows that a definite amount of consistent affection is needed in order for training to occur. The child will only give up the satisfactions of some form of uncontrolled or undesirable behavior when he is doing it for a parent who supplies a definite amount of security in return for the self denial. Often extreme economic insecurity and other frustrations help produce parents so harrassed and unhappy that they are unable to supply affection and care to their children. The practitioner rightly leaves these problems for the social workers, court, and other social agencies who arrange environmental manipulations and other treatments.

So-called psychosomatic problems in children such as asthma, skin rashes etc., of psychogenic, orgin are probably seen more often by general practitioner than psychiatrist. Undoubtedly every doctor has had a chance to see such symptoms wax and wane as the patients become tensed or relaxed, very disturbed or relatively happy.

Adolescent youth are very frequently seen by practitioners. They are often brought to the doctor either because of masturbation, defiant behavior, or marked increase in the day dreaming and withdrawal. The family doctor has learned that this is a very difficult period for an individual who is growing up rapidly but not yet fully grown, who attempts to be independent when he is not quite able to achieve this goal economically and emotionally, and who wishes to compete with adults but yet wishes to be as dependent as a child at times. The adolescent period is frequently one of great tension for both parents and their child. With the increase in conflicts, the previous tendencies of the child to become inhibited or defiant (to mention the two extremes) are enhanced.

The doctor has learned not to increase the guilt of the adolescent by questioning him about his masturbation (if this is one of the problems), but to discuss sex with him without quizzing, pointing out that he knows that youth do masturbate and worry about it and that their parents are very disturbed about such behavior. When the natural basis of this sex behavior is pointed out the youth is given further relief from his great guilt which always exists in the disturbed youth, over this behavior. The adolescent is further encouraged when he is told that this sexual behavior is a stage in growing up and that it will be possible for him to achieve an acceptable, heterosexual development eventually. The physician has learned that the emotional tensions of this period are only relieved by gentle and sympathetic handling.

The doctor is often surprised when a boy about whom a history of much defiance was given and who is initially very defiant with the doctor, begins to cry before the interview is over, despite gentle handling. However, the general practitioner has learned to realize that the defiant adolescent with a strong conscience, may be very rebellious as a defense against many passive feelings which he can no longer tolerate because they make him feel weak and like a small child. It is for this reason that a youth who is initially defiant may end up by crying.

Other youth whose conscience is less well developed, are very defiant because there is nobody in their environment whom they have learned to trust as consistent, friendly adults. It is rare that gentle and friendly handling, which avoids responding to their defiance, does not bring some results with these youth.

Psychosis is not so unusual among adolescents, and then the doctor has a difficult job of dealing with the marked emotional reactions of the parents to this fact.

Today it is especially important that our children be secure. The morale of the family and the members of the family in the Army is partially dependent on the security of the children in the home. In England, during this war, it was discovered that the disturbed children were the ones who became most upset when evacuated. It was necessary to wean these emotionally disturbed children from their parents, very slowly.

It is not unusual for the general success and ability of a general practitioner to be largely based on his capacity as a psychotherapist, who in his human relationships with his patients, is able to deal with many difficult situations in a fashion relieving to all concerned.

THE THIRD STAGE OF LABOR

Richard Paddock, M.D.

ST. LOUIS

No phase of obstetric activity excites as little interest as the third stage of labor. Coming as a sort of anti-climax or epilogue to the more dramatic stages of labor the third stage is often over-looked, disregarded or neglected. It is taken for granted and little importance is attached to its proper management.

Yet from practical experience, as well as from mortality statistics, it is evident that in accidents of labor, complications arising or culminating in the third stage, take a far greater toll than in the other stages. Accurate information includ-

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ing the country as a whole is not available, but from the published statistics it is obvious that hemorrhage, trauma, and shock (all complications of third stage origin) account for 20% of maternal deaths from child birth, and most of these during or after child birth. It is also evident that in the states with lowest maternal mortality rates, the percentage of deaths from hemorrhage, trauma and shock is less.

If one reviews the literature of modern obstetrics, beginning with text books published one hundred years ago and continuing to the present, including modern general texts, as well as articles dealing with the third stage, a definite trend is evident. This trend is to minimize the third stage as a true stage of labor and to accentuate the thought of placental separation and removal. Modern management of labor is greatly responsible for this trend.

Without being too detailed let us review briefly the normal course of the third stage, without any manipulation, interference, or intervention. Following the spontaneous delivery of the child, there is a space of time in which the activity of labor ceases. The mother, partly from the efforts of expulsion of the child and partly from the hyper-oxidation, lies in a state of inactivity bordering on a coma. During this time the umbilical cord is seen to pulsate, and there is little or no bleeding from the birth canal. Following the last expulsive contraction the uterus gradually relaxes to a semiflaccid state, elongates in the vertical axis, and is flattened in its antero prosterior diameter. This latent period of inactivity is physiological and the length of time varies with the individual.

Usually before further evidence of activity is manifest, the cord stops pulsating. As time goes on the contour of the abdomen changes as the top of the uterus reaches a higher level, a fullness may be noted above the symphysis, and concurrently or later there is a gush of blood from the vagina with evident lengthening of the umbibial cord.

Soon it becomes evident that the uterus is intermittently contracting and relaxing with increasing expulsive effort, and if the patient is in a somewhat inclined position the placenta will gravitate from the birth canal, accompanied by a moderate amount of blood. This is a phenomenon we modern obstetricians seldom see.

Following this stage, just described, the uterus should and usually does assume a contractile state of longer duration, interspersed with short periods of partial relaxation, to be again followed by contractile stages with the expulsion of blood and clots.

In nature and without interference this third stage of labor should proceed with safety and should not be attended with any high incidence of shock, trauma or hemorrhage. It is by rendering the third stage unphysiological that most of the trouble is sustained.

In our modern process of medical education we place great emphasis on proper prenatal care. We rigorously teach the mechanism of labor. We investigate to the greatest known degree the diseases of pregnancy. Yet — we are inclined to treat lightly this most dangerous of all periods of labor — the third stage.

Let us see where in we may be treading on dangerous ground when we deal lightly with the third stage. In the first place by our modern methods of amnesia, analgesia, and anaesthesia we tend to make the third stage unphysiological. Following the birth of the child the patient is less responsive. It takes longer for her to marshal her normal powers of response. The uterus is flaccid and will not respond to stimulation quickly. Hence any attempt to separate or remove the placenta would be expected to result in increased bleeding, without the normal hemostatic effect of the contractile uterus. Manipulation of the uterus by massage and squeezing to separate the placenta may result in partial detachment of the placenta with more bleeding. Polack, years ago, emphasized the opinion expressed by Ahlfeld that a completely attached placenta or a completely detached placenta was not in itself a source of bleeding; while a partially detached placenta *was* a source of bleeding, due to interference with the normal mechanism of the contractile uterus.

It has been indicated by some authorities that a long third stage following the separation of the placenta, predisposes to more bleeding during the third stage.

This may be the case, but the longer period is not associated with markedly increased blood loss and it is certainly not naturally unphysiological. Give the uterus a time to resume its

normal contractile properties before trying to separate or obtain the placenta.

It has become the customary practice of too many doing obstetrics to clamp or ligate the umbilical cord as soon as possible after birth occurs. This again is unphysiological. Until not so many years ago one of the tenets of the third stage was: "Wait until the cord has stopped pulsating." I have found lately that many of our graduates have never heard of such a thing. (Or if they ever did hear of it, they do not remember it.)

DeMarsh, and co-workers have recently shown the advantage of late clamping of the umbilical cord in so far as the infant is concerned. Their work is most convincing and deserves mention if only from the standpoint of infant welfare alone. It is a debatable question whether allowing the umbilical cord to cease pulsating facilitates the separation of the placenta. There is some evidence that it does. At any rate it does no harm and does increase the time before any manipulation for removal of the placenta should be attempted.

A most deplorable practice is that of massaging the uterus to get it to contract, or to cause the placenta to separate, immediately after the birth of the child or soon after the immediate ligation of the cord. This is another all too common custom and it may result in hemorrhage and shock, partial separation of the placenta, or in some cases inversion of the uterus. It is most fortunate that the placenta separates as soon as it does, or many more complications would ensue from unwarranted manipulation.

Unless untoward bleeding occurs it is far better to wait for clinical signs of separation than to hasten or artificially produce separation just for the sake of saving a few minutes of the physician's time. Pregnancy and labor, especially labor are time consuming processes. It is of little avail to wait patiently throughout a long and properly conducted labor and skillfully managed delivery to unnaturally hasten the termination of the third stage with the attendant hazards that may follow such a course.

Polack did also show that when failure of separation of the placenta occurred there was no need for immediate intervention. By waiting a long time if necessary, separation and normal expulsion would occur in almost every case. Too early intervention may result in hemorrhage, trauma and shock.

Following clinical signs of separation one should wait until the uterus is in a contractile state. Then and only then should moderate force be used to expell the placenta. The uterus should be grasped firmly and pressed to push out the placenta, at the same time holding it forward so that it will not be forced deeply into the pelvis, or cause the cervix to protrude through the entroitis. It is here to be emphatically repeated, that this procedure is only to facilitate the expulsion of the placenta and is not to hasten its separation. In most instances it would not be necessary to manipulate the uterus for the expression of the separated placenta, were it not for a combination of factors, namely: Some degree of anaesthesia delaying third stage contractions, and the conventional position of the patient in labor, so that the placenta will not leave the body after it passes out of the uterus.

(There seems to be a strange obsession on the part of any persons attending a delivery to give the uterus a little pressure or to massage it while waiting for the third stage to be completed. This is a most unwelcome service.)

The longer the clinical signs of separation are delayed, the more cautious one should be as to attempts to hasten removal of the placenta. There is no need for haste. Repeated attempts to produce separation may cause only partial separation, and hemorrhage. A little watchful waiting usually results in subsequent spontaneous separation.

A marked distinction between retained placenta and adherent placenta must be made. Not infrequently this difference is overlooked in dealing with cases in which the placenta has not been delivered. A retained placenta may require some manipulation or manual removal on occasion, but an adherent placenta is another matter. In adherent placenta a pathological relationship exists between the placenta and the uterine wall. The chorionic villi are embedded in the muscle bundles without benefit of interposed normal decidual tissue. Attempts at removal of such a placenta usually result in the severest of complications. If one discovers that adherent placenta is present, all attempts of manual removal should be stopped and special

preparation should be made at once to deal with this most extreme complication. Supporting measures for the patient should be carried out and hysterectomy resorted to.

Above all things it should be kept in mind that entrance of the uterine cavity through the vagina carries with it a high risk of infection, and any intra-uterine procedures for removal of the placenta may be associated with hemorrhage and shock. The shock may occur with great suddenness. It is best to be prepared for such complications when any intra-uterine manipulation for the removal of the placenta is contemplated.

The procedure of giving pituitary preparations, or ergot preparations during the third stage of labor is not one with which all agree. While it does hasten the contractility of the uterus, it may result in the retention of the placenta because of contraction of the lower segment about the internal os. It seems more logical to wait until separation takes place before giving an oxytoxic. Then the placenta may be expressed before the full effect of the drug is obtained.

A very logical procedure is to hold the uterus firmly, following the expulsion of the placenta, until the contractile effect of the drug is felt. The newer ergonovine preparations take effect in five to seven minutes when injected intra muscularly. By holding the uterus firmly and keeping it contracted during this interval the tendency toward bleeding is materially reduced. This is much more satisfactory than intermittant massaging and squeezing.

If the uterus then shows definite tendency to contract and the patient is not bleeding excessively it is better to allow the uterus to remain undisturbed save for occasional light palpation to note its size and tone. A post partem uterus does not stay tightly contraced constantly. It relaxes and contracts slowly to a moderate degree. In a patient who is not bleeding excessively, the practice of squeezing the uterus whenever it relaxes a little is not a good one. It is quite possible in a patient with a chronically subinvoluted uterus, to produce more bleeding by repeated squeezing, just as water may be squeezed out of a sponge.

It is something to think about; the management of the third stage of labor. We as physicians are constantly improving our methods. In this way, along with public education, we have constantly been lowering our maternal mortality rate. Having shown creditable improvement in what have been the largest factors in maternal mortality, we should cast about to see wherein further major improvements may be made. What greater opportunity is there than meticulous care in the management of the third stage of labor.

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DISCUSSION

Dr. John Joseph Gill, (Chicago): Since I am the one who originally persuaded the powers that be to create the Obstetric Section in the State Medical Society, I feel quite an interest in this department.

I would like to add a few things to this particular subject. One is relative to the bleeding which follows the third stage. It is not always especially due to the delivery of the placenta but frequently caused by tears in the cervix which have been neglected, and is part of the second stage instead of the third stage of labor.

Another thing which once in a great while will happen is the hourglass contraction which will cause a retained placenta. It is not very generally known just how to handle that situation when it does occur.

Those things occur once in a while and one should know more about them, — which I think the essayist might bring out in his closing discussion.

Dr. Richard Paddock, (St. Louis, Mo.) (Closing): I appreciate the remarks made by Dr. Fitzgerald and Dr. Gill. I think these men are entirely correct in calling those points to our attention.

The remarks of Dr. Fitzgerald are particularly timely, especially in view of the fact that we are using a great deal more plasma in the treatment of shock and hemorrhage, and especially after the third stage or during the third stage of labor. I believe it is well worth the investment in any hospital to have on hand an available supply of plasma in addition to the transfusion facilities that the hospital may afford.

The question of packing is also one that I think it is well to bring out at this time, for whenever one enters a uterus postpartum or whenever one finds it necessary to pack a uterus postpartum, the question of packing is one that should be carefully considered. As Dr. Fitzgerald says, if you have not packed the patient properly the first time and she bleeds through the pack, the chances are she will do the same thing again and more time and blood will be lost while attempting such a procedure.

Dr. Gill's remarks about lacerations, — tears, — of the cervix are indeed very opportune at this time

because we have to consider, in dealing with the third stage of labor, a little more than the removal of the placenta itself or its normal conduct, but we must be prepared for such emergencies as may arise as a result of lacerations.

In the paper when I spoke of removing a retained placenta, I had in mind the question of anomalies of the uterus, contraction of the cervix, and particularly hourglass contraction, because we have all had the experience of dealing with these hourglass contractions which I believe are due to anomalies of the uterus. They are not truly hourglass contractions, but are due to anomalies of the uterine wall which make the uterus appear to be in an hourglass contraction.

I have had that experience three times with one patient, the same patient, and I am inclined to believe from what I know of the patient that she has an anomaly of the development of the uterus which cannot be demonstrated at this time.

I wish to thank both the men who have discussed my paper for bringing out these timely points.

THE ETIOLOGY AND TREATMENT OF FUNCTIONAL UTERINE BLEEDING

JOHN W. HUFFMAN, M.D.
CHICAGO

"Functional uterine bleeding" is a symptom, not a disease; nonetheless it is exceedingly important clinically, and I have therefore chosen it as a topic for discussion.

Because considerable confusion and some laxity have existed in the use of the term functional uterine bleeding it seemed worth while to scrutinize the records of patients with this diagnosis. Several years ago, therefore, I began a project in which records were kept of private and dispensary patients with a diagnosis of functional uterine bleeding. The cases were separated into two large groups: 1. those patients who were subjected to surgery on the Gynecological Service of Passavant Memorial Hospital, and 2. those non-operated patients who had a sufficient work-up and a long enough follow-up to warrant a definite impression as to the cause of their bleeding. As a result of these records, factors inducing functional uterine bleeding have been classified and certain impressions have been arrived at relative to therapeutic indications and values.

The classification is as follows:

FACTORS IN THE ETIOLOGY OF FUNCTIONAL UTERINE BLEEDING

- Extrinsic (abnormalities outside the physiological mechanism causing menstruation)
  - Mechanical
    - Uterine displacements
    - Ovarian prolapse
    - Pelvic congestion
      - Varices
      - Impaired ovarian circulation
  - Inflammatory
    - Acute pelvic infection
    - Residuals of pelvic infection
      - Adherent ovaries
      - Tubo-ovarian inflammatory masses
      - Pelvic adhesions
      - Adherent uterine displacements
  - Traumatic
    - Ovarian resection
    - Ovarian displacement
    - Impaired ovarian circulation
  - Systemic Disease
  - Endocrine
    - Disturbances of the thyroid gland
- Intrinsic (disturbed physiological mechanisms)
  - Ovarian
    - Persistent follicles
    - Defective corpus luteum
  - Pituitary dysfunction

The physiological mechanism precipitating normal uterine bleeding (menstruation) is hormonal in character. The pituitary gland, the ovaries, probably the thyroid, and perhaps the adrenals are involved in producing the cyclic changes which culminate in a necrosis of the endometrium and a discharge of blood from the uterus at approximately monthly periods between puberty and the climateric. Most women menstruate moderately for from three to six days at intervals of twenty-two to thirty-five days; intervals of less than three weeks and bleeding of more than seven days is considered abnormal. While the amount of blood lost is variable, few women during the menstrual period require daily more than four or five of the pads now marketed; a sudden discharge or gushing of considerable quantity of blood is not normal.

It seems logical that two intrinsic disturbances of the mechanism causing menstruation are most apt to occur which will make functional uterine bleeding: 1. Failure of the pituitary gland to bring about the proper sequence of

From the Department of Obstetrics and Gynecology, Northwestern University Medical School, and the Department of Gynecology, Passavant Memorial Hospital, Chicago, Illinois.

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events in a normal ovary so that its cycle is not completed, with consequent continued elaboration of estrogen, and 2. failure of the ovary to respond to normal gonadotropic stimulation, the follicular cycle again not progressing through normal phases. In both instances either an unruptured follicle continues to produce estrogenic substance in varying amounts, or a defective corpus luteum fails to bring about normal shedding of the endometrium.

Functional uterine bleeding, originating from disturbances within the physiological mechanism which makes normal menstruation, tends to develop at the two extremes of sexual life, — adolescence and the menopause. It is at these two periods, first at the establishment, secondly at the cessation of ovarian activity that abnormalities of the hormonal rhythm tend to occur most often. It is unfortunate that in these cases quantative hormonal assays are too uncertain to enable us actually to determine whether ovarian or pituitary dysfunction is causing bleeding.

Functional uterine bleeding asising from mechanical, inflammatory, and endocrine disturbances outside of the physiological mechanisms of normal ovarian function may occur at any age but are seen most frequently in women in the third and fourth decades of life when sexual activity is greatest. During these years the machinery of gonadal activity is running smoothly and extrinsic influences are required to disrupt it. The basic disturbances in mechanical, inflammatory, and traumatic lesions are essentially the same: there is a failure of the ovary to go through normal cycles because its function has been disturbed by impaired circulation or injury.

So-called "Swiss cheese" hypertrophy of the endometrium is sometimes observed in cases of functional uterine bleeding. This hypertrophy is not, however, pathognomonic of functional flow, for it has been reported as being discovered in fetal endometria, in the endometria of women with normal menstrual cycles, and in non-bleeding post-menopausal uteri. That such a state of the endometrium is not necessarily a concomitant of functional bleeding is evidenced by the fact that of the 50 cases of intrinsic bleeding in this series, only 18 had so-called hyperplasia of the endometrium. Endometrial hyperplasia was noted in 46 of a group of 192 women whose functional uterine bleeding was due to extrinsic factors.

Mechanical factors which disturb ovarian physiology and produce excessive flow were the commonest cause for functional uterine bleeding among all of the women who were observed in this study. (Table I.) In the age group between 20 and 42 the proponderance of mechanical causes for functional uterine bleeding was more marked than in the group as a whole. The most frequently discovered lesions were those in which the ovaries had been dragged into the deep pelvis by a retrodisplaced uterus. These ovaries became edematous, large, cystic, with pallid tunica albuginea. The ovarian and broad ligament veins became tortuous, dilated, and varicosed in a manner comparable to the formation of varicocele in men. It was not uncommon to find the suspensary ligament of the ovary a mass of medusa-like pencil-size veins, the whole ligament several centimeters in diameter, purplish red, edematous, and congested. Such a condition must inevitably result in impairment of ovarian circulation and ovarian dysfunction. Uterine descensus and abnormal relaxations of the uterine supports dislocated the ovaries in the same fashion as did retrodisplacements and were likewise sometimes associated with functional uterine bleeding.

TABLE I

Etiologic Factors in 242 Cases of Functional Uterine Bleeding

Operated Cases		114
Extrinsic Factors		105
Mechanical	54	
Inflammatory	22	
Traumatic	20	
Systemic	0	
Endocrine	9	
Intrinsic Factors	9	
Non-Operated Cases		128
Extrinsic Factors		87
Mechanical	23	
Inflammatory	11	
Traumatic	16	
Systemic	7	
Endocrine	30	
Intrinsic Factors	41	

Pelvic infection (both gonorrheal and nonspecific) was second only to mechanical disturbances among the extrinsic causes of functional uterine bleeding among the operated cases. It is common to see moderate prolonged flow

during an acute inflammation, induced by pelvic congestion and an acute oophoritis associated with a pelvic peritonitis. After the inflammatory processes have abated, adhesions entangle the ovaries. The latter fall behind the broad ligaments and become adherent. Cicatrical changes pucker the ovarian tissues and thicken the tunica albuginea. The uterus, sagging backward because of congestion at the time of the acute infection, becomes fixed in retrodisplacement and the ovaries prolapse with it. Inflammatory cysts or areas of induration often form involving not only the ovaries but also the uterine tubes. As a result of these changes ovarian function is impaired and the follicular cycles are disrupted.

Traumatism may change ovarian physiology so that functional bleeding results. Scar formation following ovarian resection may make it impossible for the ovarian cycle to progress in normal fashion. Displacement of the ovaries particularly after salpingectomy or improperly performed suspension operations is a common cause of ovarian dysfunction. Likewise, damage to ovarian circulation through constriction of the suspensary ligament of the ovary is a prelude to cystically diseased ovaries.

Systemic diseases will sometimes produce uterine bleeding without evidence of an organic lesion in the uterus or ovaries. Although this flow is not truly functional, it is included here because of the frequency with which it is confused with true functional bleeding. Anemias, especially the type in which there is an abnormal decrease in the platelet count (thrombocytopenic purpura), may be associated with severe hemorrhage. Hypochromic microcytic anemia, often encountered in women who have been suffering from metromenorrhagias, is more often the result of the hemorrhage than an etiological factor causing the bleeding. It is essential that the attending physician be ever mindful of the possibility of an underlying hidden cause for abnormal uterine flow which at first glance appears of "functional etiology."

Endocrine factors of other than pituitary-ovarian origin which produce excessive uterine flow, should, perhaps, be classified with the intrinsic causes of functional uterine bleeding. However, as yet, the relationship of the endocrine glands to normal ovarian function is not sufficiently understood to warrant such a step. The thyroid-ovarian interrelation, evidence of which is often seen clinically, is probably not a direct association. It has been suggested by Hamblen and his co-workers that the hypometabolism of thyroid failure results in a "slowing down" of ovarian activity. It is logical to assume that, with the decrease in metabolic activity in the body as a whole which is a concomitant of thyroid deficiency, there should be a decrease in the activity of the gonads. The gonads, however, appear to have a higher degree of sensitivity to this metabolic disturbance than does the rest of the body, for many of these women evidence no symptom of lowered metabolism other than their functional menorrhagia.

In the group of women in the series reported herewith who were under forty years of age and who were not operated upon, the discovery of a lowered basal metabolic rate and a high blood cholesterol level was common. The efficacy of thyroid substance in treating this group was most gratifying; it must be administered under basal metabolic rate control, to the limit of the patient's tolerance, and must be given continuously for long periods of time. Some of these patients will require thyroid substance throughout their lives.

Treatment. After reviewing the many causes for functional uterine bleeding as outlined above, it is evident that general statements cannot be made regarding treatment. When bleeding is due to disturbances of function resulting from extrinsic factors, treatment is directed toward correction of the underlying etiologic factor responsible for the flow. When there is an intrinsic cause for the flow an attempt should be made to regulate the disturbed mechanism responsible for the bleeding; occasionally, however, in both instances, the age or the condition of the patient warrants other measures.

Treatment of functional uterine bleeding due to mechanical factors necessitates individualization. In a young woman an attempt should be made to replace the uterus and support it with a pessary in an effort to prove that the prolapsed ovaries associated with the retrodisplacement were the cause of the bleeding. Unfortunately, frequently, normal ovarian function returns too slowly to make such a therapeutic test of much value. While the dictum that symptomless ret-

rodisplacements should be left alone is a wise one, nevertheless, when cystic ovaries and uterine bleeding are associated with a heavy retrodisplaced uterus, operative replacement of the uterus and elevation of the ovaries to a normal position is warranted. At the time of the replacement operation it is imperative that every means be taken to protect the ovarian circulation and to return the ovaries to the ovarian fossae; undue snuggness of tissues should be avoided; proper support of the uterus by suture of the uterosacral ligaments, advancement of the bladder, combined with the Baldy-Webster shortening of the round ligaments, as advocated by Arthur H. Curtis, should be done. Shortening of the utero-ovarian ligaments may also be necessary to give the ovaries adequate support. In older women, or where childbearing is not a factor, removal of the supravaginal portion of the uterus is often the wisest course.

Uterine descensus of considerable degree usually occurs in older women and produces other symptoms in addition to bleeding. Bearing down and dragging discomfort with symptoms referable to an associated cystocele and rectocele often accompany downward displacement of the uterus. In such instances hysterectomy at the time of the vaginal procedure is worthy of consideration.

Good judgment suggests that non-surgical therapy, even if effective when administered month after month, is unlikely to result in other than temporary relief of bleeding caused by ovaries deranged by scarring and adhesions. As a general rule these patients have been sterilized by an infection. Bleeding and usually some pain are their chief complaints. Endocrine therapy may improve their condition temporarily but surgery is usually the best recourse. Removal of a bleeding uterus (whose ambition to harbor a gestation can never be realized), freeing of adhesions and entangled ovaries, and excision of unhealthy tissue, is at times a more conservative course than prolonged attempts to control the flow by less heroic measures. At the time of the operation "radical conservatism" should not be indulged in. It is to be remembered that the bleeding comes from the uterus and that ovarian function which has been impaired by old inflammation can rarely be improved by surgical procedures upon the ovary.

It is essential that mention be made of the distressing frequency with which patients are seen who complain of uterine bleeding and whose history elicits the fact that in the past a bilateral salpingectomy had been performed because of tubal disease and the uterus left in situ. Ovarian disease incident to the surgery or to the old inflammation subsequently caused functional uterine bleeding. It would have been far better to have performed a supravaginal hysterectomy or defundation at the time of the tubal operation.

The treatment of ovarian traumatism is preventative. At the time of pelvic surgery every effort should be made to avoid distortion of the ovaries or impairment of their circulation. Resection of the ovary, while occasionally required, is an unhappy necessity which should be resorted to with reluctance.

In the adolescent and the woman of childbearing years it is imperative that an attempt be made to reestablish a normal physiological mechanism in the ovary. Theoretically this should be possible through the administration of pituitary substance. Unfortunately, the present available preparations of anterior pituitary and anterior pituitary-like substances have been, in my hands, failures in the treatment of functional uterine bleeding. It was hoped that extracts of the serum of pregnant mares would be more effective than the previously used chorionic gonadotropins and whole pituitary products. This hope has not been realized. Hamblen and his co-workers have reported the value of the combined chorionic and equinine gonadotropins in the treatment of functional metromenorrhagias. I have been unable to duplicate their success.

The use of the ovarian hormones estrogen and progesterone in the treatment of functional uterine bleeding is basically unsound. Continued abnormal secretion of estrogens in itself is a cause for excessive flow. The administration of estrogens may inhibit the pituitary so that there will be a temporary decrease in abnormal bleeding. Once the estrogen has been withdrawn, however, the flow recurs more profusely then ever. Progesterone, in dosages up to 40 mgm. weekly, has failed to inhibit functional bleeding when given to some of the patients in the series reported herewith. Neither estrogens nor progesterone affect the ovary nor the dys-

function causing the trouble except through whatever pituitary inhibition they may cause.

Thyroid substance is of great value as a therapeutic agent in these cases even in the absence of a demonstrable hypothyroidism. Daily doses given with caution under basal metabolic rate control and with due regard for the development of evidences of overdosage, will often decrease functional menorrhagia. Although the modus operandi is not fully understood, apparently the stimulating effect of thyroid substance upon the cellular metabolism of the gonads is comparable to that upon body metabolism as a whole.

Androgenic therapy is the most worthwhile non-surgical agent now available for the treatment of functional uterine bleeding arising from intrinsic causes in younger women. As a result of effective pituitary inhibition following the administration of male sex hormone the ovarian cycle is brought to a halt, the ovarian activity temporarily ceases, and bleeding stops. The advantages of male sex hormones are its effectiveness, its safety when properly administered, the preservation of whatever reproductive ability the woman possesses, and the avoidance of operative procedures. The disadvantage is the danger of producing temporary masculinizing changes in women when testosterone propionate is improperly administered. These dangers have unfortunately been overemphasized. It should not be given to women with androgenic characteristics and the dosage should be restricted to 25 mgm. every other day for a total of not more than 350 mgm. 400 to 500 mgm. is the masculinizing level for most women. After using testosterone propionate in many cases of functional uterine bleeding during the past five years, in adherence to the above mentioned precautions, I have seen but one incident where masculinizing changes caused any concern, and in that instance the changes disappeared shortly after cessation of treatment. When ovarian activity begins following cessation of the administration of male sex hormones, frequently normal menstrual cycles become reestablished. This is true, however, in only some of the patients treated. It is preferable therefore to consider androgenic therapy as inhibitory rather than curative. Testosterone propionate can, nevertheless, be given in courses of 300 mgm. each several times yearly for many years without ill effect. Among my patients are three women who have received androgenic therapy for five years without any evidence of undesirable reaction. One of them has received a total dosage of 7575 mgm. during five years of treatment.

Occasional reports of the value of snake venom in stopping metromenorrhagia have appeared in the literature. Insulin has been considered of value. Stypties and oxytoxics are widely used. None of these agents correct the cause of the flow and few of them relieve it other than momentarily.

Liver therapy, high protein simple diets, rest, sunshine, and other supportive measures are of unquestioned value, not specifically but because of the constitutional improvement they produce. In rare instances blood transfusion, made necessary by a profound anemia, will be followed by cessation of abnormal flow.

Intrauterine radium applications in adequate dosage stops functional uterine bleeding. It achieves this effect by producing ovarian and endometrial atrophy. Its use, as a general rule, should be restricted to women of the menopausal age group. The intrauterine application of radium in women under 42, if given in small doses as often recommended, may make permanently malfunctioning ovaries, produce partial menopause and be followed months later by an atypical uterine flow as annoying as the original bleeding.

Intrauterine radium is the simplest and most satisfactory method of treating excessive bleeding of a functional type in women over 43 years of age. It should always be preceded by a diagnostic curettage and a painstaking examination under anesthesia to rule out organic causes for the flow. 1800 milligram hours is an average adequate dosage.

The use of x-ray irradiation either for the purpose of inhibiting ovarian activity or for alleged stimulating effects on the hypophysis and ovaries is of questionable merit. Intrauterine radium radiation of the ovaries is more effective than x-ray if ovarian atrophy is desired. That the x-ray is capable of producing "stimulating" effects upon the hypophysis and ovaries is still subject to question. Like radium therapy, x-ray treatments should be preceded by a diagnostic curettage.

Curettage is not a treatment for functional uterine bleeding. The flow will stop following curettage for several weeks, but it will then commence again. It is imperative, however, that women in the older age groups be curetted prior to instituting any type of treatment for their bleeding. This should be done to rule out hidden intrauterine tumors. Repeated meticulous examinations searching for missed intra-abdominal and systemic disorders should be made repeatedly in all groups of women who suffer from functional uterine bleeding.

CONCLUSIONS

Two hundred and forty-two women suffering from what had been diagnosed as functional uterine bleeding have been observed during the last several years. An attempt has been made to determine the etiological factors causing their bleeding and to form impressions as to therapeutic indications and values in the management of their problems. The etiologic factors were divided into causes outside of and within the physiological mechanisms producing normal uterine flow (menstruation). It was found that mechanical and endocrine disturbances (not including those of the pituitary-ovarian relationship) were the most common extrinsic factors in making that type of uterine hemorrhage which arises from disturbances of ovarian function outside the physiological mechanism causing menstruation. So-called true functional uterine bleeding arises from intrinsic disturbances of the pituitary-ovarian relationship. These occur most often at the extremes of sexual life and are due to either pituitary or ovarian dysfunction. In reality it is probable that they are fairly rare and that close scrutiny will place more and more patients in the group whose bleeding is of extrinsic orgin. A clinical diagnosis of functional uterine bleeding should not be made, except in rare instances, without an explanation of its etiology. Functional uterine bleeding as such is not a clinical entity; it is rather a symptom of one of a number of varied organic or endocrinopathic states.

DISCUSSION

Hubert L. Allen, M. D. (Alton): I feel that Dr. Huffman's paper is a very timely one because it serves to clarify a problem which has been outstanding in recent years.

Functional uterine bleeding, as he has stated, is not truly a diagnosis. On the other hand, his separation of factors causing so-called functional bleeding into extrinsic and intrinsic at least gives us a clue to determination of whether or not we can ever regard functional bleeding as a diagnosis.

The extrinsic factors he has ruled out of the picture. The intrinsic factors I think we may regard as being the only definite diagnosis or group of patients who could be diagnosed as functional bleeders.

In Dr. Huffman's list of extrinsic factors, No. 5 is endocrine. He speaks of hypothyroid individuals. It may be that some of these patients would fall into the category of true functional bleeders because, as he also pointed out later in his paper, the occasional patient with a normal basal metabolic rate determination and normal blood cholesterol will respond very favorably to minimal doses of thyroid substance given rather empirically.

As to the treatment of these conditions, — and I am referring now entirely to the intrinsic factors, — thyroid has been mentioned. It is our sheet anchor.

The gonadatropic hormones which offered such startling promise when they first were brought out, — referring to the chorionic gonadatrope now, — did seem able to produce ovulation in the normal ovary and then failed almost totally when subjected to the real test in abnormal conditions.

Estrogenic therapy is probably irrational on the grounds mentioned by Dr. Huffman; namely: That these cases of true functional uterine bleeding have already a high circulating level of natural estrogen. It is true that estrogenic substances given in large doses will inhibit any type of bleeding due to the pituitary — inhibiting effects of all sex sterols. Cessation of the treatment is almost invariably followed by a worse situation than the original disease.

I would like to disagree with Dr. Huffman to a certain extent with regard to progesterone therapy. Many investigators have reported very favorably on the use of this substance. If many of the functional uterine bleeders have an anovular cycle, the net effect is to produce a proliferative endometrium which shows none of the secretory changes associated with corpus luteum activity. We do know that progesterone will produce a direct effect upon the mucosa. We also know that withdrawl of the medication will result in a more or less normal flow.

It is true that the therapy will have to be continued over many and many a cycle and it is equally true that bad results will recur, bleeding will recur when the treatment is stopped in some but not all cases.

I agree with Dr. Huffman that the androgens offer the best results that are being obtained from endocrine therapy. I mean it is even possible, when using the androgens, to see normal cycles continue after withdrawl of the medication. The same criticism, however, that applies to the other sterols is true of the androgens, — that discontinuance of the drug will frequently lead to relapse.

I'd like to say a word about stilbestrol. Since this potent preparation came on the market, it is being used in any and all functional gynecologic complaints. It is true that given in large doses, — and it is being given in very large doses, — normal or abnormal bleeding will stop. Almost invariably the situation which results after its discontinuance is far worse than the original disease.

Parenthetically, one might wonder what is happening to some of the young women who are receiving stilbestrol in large doses. There can't help but be a paralysis of the follicular apparatus in many of these individuals and it is certainly to be hoped that the amenorrheas and menorrhagias and sterility problems that are being induced will prove to be temporary phenomena.

With regard to the so-called radical measures of treatment of functional uterine bleeding, I think these boil down to three in number: Curettage, intrauterine radium implantation and hysterectomy.

Curettage offers only palliative results and is usually done for diagnosis and not for therapy. However, it is possible to see the occasional case who will re-establish a more or less normal cycle following curettage. Careful examination of the scrapings at that time may reveal a normal proliferative endometrium.

Intrauterine radium, as Dr. Huffman has mentioned, finds its best use in the pre-menopausal individual in whom ovarian function is no longer as vital as in the younger person. Nevertheless, there are many investigators who have recommended the use of sub-menopausal doses to younger individuals and have reported not only the re-establishment of a normal cycle but subsequent child-bearing.

Most of these men mention the fact that the incidence of obstetrical complications, however, in these cases is much higher than normal.

The use of radium is certainly not without its pitfalls and some of these should be mentioned: Pyometra, cervical stenosis, cystitis, proctitis, enteritis, fistula formation and the like can all follow the injudicious use of radium.

Hysterectomy has traditionally been reserved to the patient at or near the menopause, but there may be some reason to think that hysterectomy may be more conservative, in some instances at least, than the use of radium in the younger individual.

If we admit that functional uterine bleeding is a disease entity, then the problem is two-fold: One of accurate diagnosis — and in this I think Dr. Huffman's paper is most helpful, helping us to rule out the lesions which formerly were tossed into the wastebasket, — diagnosis of functional bleeding and assigning them to their proper cause; and secondly, the problem of the treatment of the younger individual.

The androgens are certainly worth a trial but first and foremost I think many of you will agree is thyroid extract.

Finally, the problem of functional bleeders, the headaches they give the private practitioner are notorious. I think many of you will agree that very rarely does a woman of this type come into your office that she does not give a history of having received one or more series of injections or "shots" as they refer to them, at the hands of other doctors. You have no way of telling what and how much hormone was given and the patient, who has developed a conditioned reflex against the use of parenteral medication, and thinks they are all alike anyway, is not in any mood to go forward with a program of rational organotherapy.

I'd like to say that I think Dr. Huffman is to be congratulated upon the solvency of his patients. He called attention to the fact that he had three patients who had been treated for a period of five years, intermittently and successfully, with androgens. It is a very expensive drug and I am not fortunate enough to have many in that income bracket in my practice.

E. Harold Ennis, M. D. (Springfield): I would like to ask the Doctor if he is giving the testosterone by mouth.

John W. Huffman, M. D. (Chicago): I have excluded from these cases, Dr. Gill, patients whose bleeding was due to tumorous growths, including endemetriosis. Bleeding due to endometriosis and also bleeding coming from feminizing tumors of the ovary might be included with the extrinsic causes of functional flow because ovarian physiology is disturbed by these neoplasms. I felt however that bleeding from any neoplasm of the genitalia should be excluded from a discussion of functional bleeding.

Methyl testosterone has not, to me, been fully satisfactory. I attempted its use in some instances in which androgenic therapy was indicated and could not satisfactorily control the dosage.

Perhaps the cost of androgenic therapy is the reason why only three of my original patients are still taking it. They are young business women who feel that the cost of the medication is counterbalanced by their opportunity to continue at work and the avoidance of surgery. The patient who has had the largest dosage feels that her expenditure has been well justified because she hopes to marry soon and attempt to rear a family. I do not know how much reproductive ability she has. In laboratory animals we can inhibit reproduction by the administration of testosterone; when the androgen is withdrawn later the animals regain their full reproductive powers.

The use of androgens will stop the flow in almost every woman who has true functional uterine bleeding; androgens produce this effect through inhibition of the mechanism which caused the bleeding, thus giving the ovarian cycle an opportunity to reestablish a normal rhythm.

Next to androgens thyroid is our most effective therapeutic agent.

Dr. Allen felt that I had been shall we say a trifle unfair? to progesterone. I want to emphasize that progesterone does not affect the disturbance which causes the bleeding. As soon as it's effect upon the

endometrium ceases and the endometrium has gone through a quiescent stage, the bleeding will recur. That has been my experience in an appreciable number of cases, I think the majority of investigators give as 30% to 60% the number of patients who are helped by progestational therapy.

I wish to emphasize the misuse of stilbestrol, as Dr. Allen brought out. Stilbestrol should not be used for the control of functional flow. It is a chemical which produces estrogenic changes; in large doses it may inhibit the pituitary temporarily but it also causes massive hyperplasia of the endometrium. In the last ten days I have seen five women, the oldest 75 years of age who suffered from post-menopausal bleeding induced by stilbestrol. They all had to be curetted. This is not a criticism of the proper use of stilbestrol, but it does indicate its estrogen-like potency.

Sub-castrating doses of radium in young women may help some patients. I have, however, seen three women in the last few months under thirty years of age who had ovarian dysfunction as a result of the intrauterine application of radium for the control of functional bleeding. The doses ranged between three hundred and four hundred milligram hours.

In summing up it occurs to me that perhaps we should not call it functional uterine bleeding at all. Many years ago Dr. Graves of Boston coined the term "dysfunctional uterine bleeding" for the problem which we have been discussing. I have hesitated to use the term "dysfunctional" because it is not in common parlance, although it might well be.

SUSCEPTIBILITY OF THE ADULT POPULATION TO DIPHTHERIA

A. J. Levy, M. D., Dr. P.H.

District Health Superintendent
Health Unit No. 6, Gilman

The problem of adult susceptibility to diphtheria has recently been giving public health workers[1-2] and administrators[3-4] great concern. The Schick test performed on high school, college, university students, and on adult populations taken at random, disclosed that the percentage of negative reactors to this test, particularly in the rural areas, ranged between 30 and 56 percent.[5-11] This means that over 50% of the adult population is evidently susceptible to diphtheria. Though these figures are contrary to the accepted notion found in Preventive Medicine text books,[12-13] that from 85 to 90 percent of adults from 17 years upward react negatively to the Schick test, it has, nevertheless, recently been noted that the rate of attack from diphtheria in the adult population is on the increase[1-2].

An attempt will be made in this paper to present additional facts regarding the susceptibility of adults to diphtheria, gathered from personal observations and experience in the field of diphtheriology, and corroborated by recent publications found in the literature. The study of the susceptibility of adults to diphtheria, as demonstrated by the Schick test in adults, will first be discussed and will then be followed by a statistical analysis of records showing the morbidity and mortality from diphtheria among adults during the last five years in Illinois.

The Schick test is too well known to need any description or discussion. In 1913, a year after Schick discovered his test, Michiels and Schick[14], and later Park and Zingher[15], applied this test as a measuring rod of immunity to diphtheria on a community wide scale, thus arriving at a classification of the population into "immunes" and "non-immunes." The extensive study of Park and Zingher and the work done by Gröer, Kassowitz and Schick,[16] resulted in the table found in the Brenneman system of Pediatrics[17], demonstrating a gradual development of natural immunity to diphtheria by age groups.

TABLE 1

Age	Percent Positive	Percent Negative
1 — 3	91	9
4 — 6	83	17
6 — 7	61	39
8 — 9	50	50
9 — 10	44	56
10 — 11	32	68
11 — 12	29	71
12 — 13	28	72
13 — 14	24	76
14 — 15	23	77
15 — 17	20	80
17 & up	18	82
	14	86

Shows Decline of Susceptibility and Increase of Natural Immunity by Age Groups.

Taken from the Brenneman System of Pediatrics.

Table 1 is presented for the benefit of those who are not familiar with the figures or to refresh the minds of those who are acquainted

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TABLE 2

Percentage of Schick Tests Among Adults as Published by Various Authors

Name of Author	Age Groups	No. Tested	% Pros.	% Neg.	Remarks
Pulley & Fleisher (6)	22-27 (University Students)	816	33.8	66.2	Urban
			44.6	55.4	Semi-urban
			46.7	53.3	Rural
Thomas & Glazerbrook (7)	University Students	243	70.0	30.0	Well-to-do
	Militia Youths	103	36.0	64.0	Poor
Pasricha & Banerjie, etc. (8)	Adults	241	37.6	62.2	Hindoo natives
	Adults	137	49.6	50.4	Anglo-Hindoos
Cooke, J. V. (9)	Adults	1054	63.0	37.0	Nurses
Campbell, P. S. (4)	Adults	405	59.0	41.0	Univer. Stud.
	Adults	243	80.0	20.0	Normal S. S.
	Adults	250	80.0	20.0	Civil Servants
	Adults	250	55.0	45.0	R. A. F.
	Adults	558	67.0	13.0	At random
Thelander, H. E. (1) (1934)	Adults		65.5	34.5	Med. Students Dental Students Pharmacy Students
Thelander, H. E. (2) (1940)	Adults	588	53.9	44.1	Nurses
Cameron (5)	Adults	139	48.0	52.0	

TABLE 3

Percentage of Schick Tests Among Adults Observed in Illinois District Health Unit No. 6.

Readings	Age	No Tested and Read	% Pos.	% Neg.	Remarks
1. High School	14-20	2402	60.8	39.2	
2. Parents & Teachers	20-70	396	82.0	18.0	Picked at random
3. Inmates of Illinois State Institution M.	23-65	5735	40.6	59.4	
4. Employees of Illinois State Institution M.	20-65	854	56.7	43.3	
5. Village W.	19-54	136	63.0	37.0	400 Population
Village C. P.	20-58	119	57.0	43.0	260 Population (During outbreak from Diphtheria.)

with it. This table which was primarily intended to give a description of natural immunity taking place in the urban areas, apparently served as a basis for the general notion that adults are immune to diphtheria. All medical text books carry similar information. However, Schick states definitely that these figures were applicable to urban areas, but medical, as well as lay people, seem to pay little heed to this statement. Since the publication of the above table, many public health workers have performed the same tests on adults, particularly in the rural areas, but could not corroborate the above quoted immunity percentage in adults.[1–10]

Table 2 gives a synopsis of the results of Schick tests on adults, published by various authors.

Table 3 presents the results of personal observations of the Schick test performed on various groups of adult population in Illinois.

A comparative study of the three tables presented above, demonstrates that while Table 1 gives only 14% positive, for the ages of 17 and up, and 86% negative, Table 2 shows that the Schick tests varied in adults from 35% to 87% positive and from 15% to 66% negative. In Table 3 the percentage varied from 48% to 82% positive and from 18% to 52% negative. These

later figures, taken as a sample from the population at large in rural, semi-rural and urban areas, indicate that a large percentage of the adult population is not immune to diphtheria as the Schick test demonstrates.

In the tests conducted by the author, the Schick material was manufactured by the laboratory of the Illinois State Department of Public Health, and was furnished diluted and ready to be used. One tenth of a cubic centimeter, as measured by special Schick syringes, was injected intradermally in the flexor surface of the skin of the left forearm. No control was used, since the reading was done only after the fifth day following the injection. Thus, readings of false positive reactions were avoided and at the same time all delayed reactions were caught as suggested by Cameron[5], Pierre[18], and Beckwith[19].

In order to obtain uniformity in the performing and reading of the tests, the author did all the Schick testing and the readings, with the exception of those at the State Institution, where he was assisted by a physician who followed the same method and technique. All readings, however, were done by the author.

While conducting various Schick tests on rural school children, parents, teachers and members of women's clubs, all adults in the community were invited and encouraged to take the test. In this group there were 396 adults varying in ages between 20 and 62, average age being 36. Only sixty-three, or about 18%, gave negative reaction, while the majority, 324 or 82%, reacted positively.

A Schick test was performed on inmates and employees of State Institution M, prior to immunization against diphtheria.* There were 5963 inmates and 963 employees Schick tested but only 5735 inmates and 854 employees were read. The inmate population ranged in ages from 22 to 85, and the employees population from 20 to 60. The percentage of positive reactors among the employees was 56.7%, while that of the inmates was 40%. This difference might be explained by the fact that the majority of the inmates came from the urban area of Chicago, while the employees came from down state.

*The author wishes to express his indebtedness and gratitude to the Managing Officer of State Hospital and to the physicians who assisted in carrying out this program.

Time will not permit a lengthy discussion on the value of the Schick test as an expression of immunity or the lack of immunity. The validity of the Schick test was questioned by a number of investigators, such as Flood[20] in this country, Martin, O'Brien, Copeman and their associates[21] in England, and Poeh and Leasch in Europe[22]. On the other hand, Masseloff and Karsh[23] in this country conducted a special study with the object of comparing the results of the Schick test with titration of a quantity of antitoxin found in the blood, just before the Schick test was performed, in order to verify the postive and negative findings. Their work proved that titration of the blood of 50 individuals who presented negative reaction, 48 or 94% had at least 1/30 units of antitoxin in one cubic centimeter of blood. In not even one instance did they find one person with negative reaction and with no antitoxin in his blood. They concluded: "Experience has proven beyond any doubt that the Schick test when correctly performed is a practical and reliable indicator of the presence of diphtheria antitoxin in the blood in an amount sufficient to protect individuals against clinical diphtheria."

Cameron[5] tested a group of 139 individuals who were selected at random and whose ages varied between 18 to 61. Before performing the Schick test a sample of blood was obtained from each person and was titrated for the quantity of antitoxin it contained. Sixty-eight persons possessed less than 1/500 of a unit per cubic centimeter of blood. Fifty-eight showed more than 1/100 of a unit per cubic centimeter, and the remaining had between 1/500 and 1/100 units per cc. of blood. This entire group was Schick tested and 66 out of the 68 who possessed less than 1/500 of a unit per cubic centimeter were frankly Schick positive, one was doubtful negative and one was doubtful positive. In contrast, none of those whose blood contained 1/500 or more of antitoxin per cc. of blood were positive. Cameron showed experimentally that with the Schick test he was able to detect nearly every case with 1/500 of a unit of antitoxin or more and those with a lesser amount of antitoxin than this minimum. He suggested postponing the reading of the reaction until the fifth day when all the delayed

TABLE 4

Comparative Morbidity

Year	Age Groups 0 — 14				Age Groups — 15 and up			
	Chicago		Down State		Chicago		Down State	
	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.
1937	540	75.8	——	——	115	3.4	——	——
1938	523	73.3	615	64.7	112	4.5	384	10.9
1939	462	63.3	406	44.1	126	4.7	352	9.9
1940	292	40.9	322	34.2	73	2.8	243	6.6
1941	422	57.7	211	22.2	87	3.3	212	5.9

TABLE 5

Comparative Adult Rural and Urban Population by Sex Distribution

Year	Chicago				Down State			
	Male		Female		Male		Female	
	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.	No. Cases	Rates Per 100,000 Popula.
1937	42	1.3	73	2.4	—	—	—	—
1938	39	1.2	73	2.3	—	—	—	—
1939	57	1.8	69	2.1	—	—	—	—
1940	18	0.5	55	1.4	88	2.7	155	4.9
1941	41	1.2	46	1.4	97	3.0	155	3.6

reactions can be detected. In conclusion he states, "The Schick test serves to detect a very high percentage of adults who have a low diphtheria antitoxin titer in their blood."

The Council on Medical Research in London[24] expressed the following opinion: "The Schick test is a very reliable instrument for ascertaining who is immune to diphtheria." An appraisal of the Schick test as reflected in the literature through the reports published recently by different public health workers was made by F. H. Top[25] who concluded: "It would appear that the Schick test is a satisfactory method for determining the susceptibility to diphtheria."

After substantiating the validity of the Schick test as a tool of determining the immunity of an individual to diphtheria, a further evidence of the susceptibility of adults to diphtheria may be gleaned from the statistical records for this disease.

The morbidity records from diphtheria in Illinois during 1937-1941 were analyzed. For the purpose of this study two broad classifications, urban and rural, were chosen. Chicago was selected to represent the urban population, and "down-state" the rural.* For technical reasons the age grouping was limited to (a) children from one to fourteen years of age, and (b) adults, from fifteen and upward. Table 4 presents the yearly incidence from diphtheria per localities and age groups described above, per hundred thousand population. The comparative study of the age group — 0-14, reveals a considerably smaller rate of incidence from diphtheria among the rural population than the urban. While in the rural areas there was a considerable drop in the rate of incidence, from 64.7 in 1938 to 22.2 in 1941, about two-thirds lower, on the other hand, there was only a slight drop, about one-fourth, in the urban areas (see col. 2 & 4). The rates

*Note:- This classification forms a rough statistical expedient of the population in Illinois, as communities having 2500 population and over constitute a larger figure than that of Chicago alone; however, this classification was selected in order to overcome unsurmountable technical limitations.

of incidence from diphtheria in adults in the urban areas are very small and vary from 2.8 to 4.7, about twice as low as the incidence among the rural population where the lowest rate is 5.9, and the highest 10.9. This demonstrates that the rural adult population is more frequently affected with diphtheria than the urban. This is most probably due to the fact that a higher percentage of susceptible individuals reside in the rural areas.

The study of adult susceptibility to diphtheria as reflected through the morbidity records indicates that the disease has a predilection to adult females more than to adult males. This statement holds good for both rural and urban areas. The rates in Table 5 corroborates this statement. The rates of attack from diphtheria for down-state in 1940 and 1941, being 2.7 and 3.0 for male and 4.9 and 3.6 respectively, is about twice to three times greater than the rates for the same period of time in Chicago, where the rates were 0.5 and 1.2 for male and 1.4 for female respectively. This is noted by the high figures of the rate of attack in the rural areas.

In 1941 the incidence of diphtheria in both sexes showed a tendency toward equalization. The figures are too small to enable us to judge the significance or the permanency of this change.

Although Table 6 shows that mortality in Illinois from diphtheria has been considerably higher in children than in adults, it is nevertheless gratifying to learn that the death rate was persistently on the decline, decreasing from 8.0 in 1936 to 3.9 in 1940, a drop of almost 50% in a period of five years. On the other hand, while it is true that the death rates from diphtheria in the adult age group has been low in comparison with the death rate in children, but the rate 0.3 has been stationary since 1938.

TABLE 6

Death Rates from Diphtheria in Illinois

Year	Age Groups 0 — 14 Number Deaths	Age Groups 0 — 14 Age Specific Death Rate per 100,000*	Age Groups 15 — Up Number Deaths	Age Groups 15 — Up Age Specific Death Rate Per 100,000*
1936	138	8.0	32	0.5
1937	131	7.6	22	0.4
1938	102	5.9	17	0.3
1939	99	5.7	19	0.3
1940	68	3.9	19	0.3

*Population estimated for years 1936-39 on basis that preliminary results of 1940 census show 22% of population under 15 years.

An analysis of the percentage of deaths per age groups, as demonstrated in Table 7 indicates that there was a definite increase of seven points among adults, the figures being 14.4 in 1937 and 21.8 in 1940.

A glance at Table 8 shows that there was hardly any difference in the mortality rate of adults, male and female, though in 1940, the rates among females were higher, being 0.2 per 100,000 population of male as compared with 0.4 per 100,000 females.

The general morbidity from diphtheria among the urban groups is much less than that of the

TABLE 8

Comparative Death Rates of Adults from Diphtheria by Sexes in Illinois.

Year	Males 15 and Up No. Cases	Males 15 and Up % Per 100,000 Population	Females 15 and Up No. Cases	Females 15 and Up % Per 100,000 Population
1936	17	0.5	15	0.4
1937	11	0.3	11	0.3
1938	10	0.3	7	0.2
1939	11	0.3	8	0.2
1940	7	0.2	12	0.4

TABLE 7

Diphtheria Deaths in Illinois, 1936-1940, By Age Groups

Year	Total Deaths	Death Rate per 100,000 Population	Age 0 — 14 Number Deaths	Age 0 — 14 Percent of Total Deaths	Age 15 & Over Number Deaths	Age 15 & Over Percent of Total Deaths
1936	170	2.2	138	81.2	32	18.8
1937	153	2.0	131	85.6	22	14.4
1938	119	1.5	102	85.7	17	14.3
1939	118	1.5	99	83.9	19	16.1
1940	87	1.1	68	78.2	19	21.8

"down-state" group, (See Table 9), varying from 619 cases in 1936 to 365 in 1940 in Chicago, and from 988 cases in 1936 to 510 in 1940 in "down-state." In contrast, the number of deaths was apparently higher in the urban areas, being 91 deaths in 1936 and 40 in 1940, as against the rural figures, 71 and 45 deaths respectively. Thus the fatality ratio per hundred cases in urban areas is higher than in the rural. But though the high fatality ratio of the urban has been decreasing persistently from 14.8 to 10.0, the ratio for the rural has been on the increase from 7.2 in 1936 to 8.8 in 1940.

A brief summary of the records given in the tables above indicates that diphtheria among the adult population was most prevalent in rural areas and especially among females. A further study on this problem should be done per counties in order to determine the areas and communities affected most. It was practically impossible to do so at present because of the considerable shifting in population due to the war efforts.

The following outbreaks which took place in 1939 and in 1940 will probably shed some further light on the problem of the susceptibility

TABLE 9

	Case Fatality Rate					
	Chicago			Down State		
Year	Case	Death	Fatality Rate	Case	Death	Fatality Rate
1936	619	91	14.8	988	71	7.2
1937	655	86	13.1	856	60	7.0
1938	635	70	11.0	852	45	5.3
1939	588	60	10.2	672	50	7.4
1940	365	40	10.9	510	45	8.8

of the adult population to diphtheria.

In the summer of 1938, a small outbreak of diphtheria occurred in the Village of W, whose population was 450. In this community there were 5 cases of diphtheria in adults and only three in children. Two cases of the latter group terminated fatally, but no death occurred among adults.

About the middle of January 1939, diphtheria appeared in an epidemic form in C. R., a community with a population of 250, where 25 persons were afflicted, with no fatalities. The age group classification of the diphtheria cases were as follows: 8 pre-school, 5 school age and 12 adults. The preponderance of cases in the adult population was noticeable.

A study of sporadic cases of diphtheria in the district during 1940-1941, revealed a proportion of three adults suffering with diphtheria to one child. A similar observation was noted in several other districts. No deaths occurred among the children, but there were two adult female fatalities.

DISCUSSION

The preponderance of diphtheria among adults under certain conditions was noted by Thelander (1-2). In his last report special attention was directed to the problem of diphtheria among adults. The rise in the numbers of cases from 20 in 1935 to 38 and 68, in 1937 and 1938 respectively was very striking. This sudden increase was of such significance in San Francisco that the local Health Officer, Dr. Geiger, deemed it necessary to call the attention of his colleagues to this fact, and urged them to be on the alert for diphtheria in adults.

P. S. Campbell[4] described a recent outbreak of diphtheria in Halifax Nova Scotia, in the fall of 1941. Although the number of cases reported in adults in this outbreak was high, the mortality rates, however, were much lower than in children. A high percentage of these cases were members of the R. A. F. and trainees in the camp.

Two recent outbreaks of diphtheria among migratory workers in a camp near Blissfield and in Saginaw County, Michigan, were described in the Journal of the American Medical Association[26].

It has been demonstrated repeatedly that the rural population constitutes a great reservoir of susceptibles to diphtheria. In District Health Unit No. 6 in Illinois, the study of susceptibility, as demonstrated by the Schick test conducted on rural populations, varied from 65 to 80%. The more widely dispersed the populations, the higher was the degree of susceptibility. Similar observation was made by Bergmann[27] Pulley[6] and his Associates. The morbidity records in Illinois corroborate this observation, inasmuch as a high degree of incidence from diphtheria is found in the down-state areas, in comparison with the prevalence of this disease among adults in Chicago.

As long as a rural population remains stationary, there would be no anticipation of alteration in the "status quo" and the situation is easy to handle. However, since the advent of the United States into the war, the problem of a migratory rural population moving daily into newly industrialized areas for defense work create a problem of major significance. A considerable percentage of the rural population is being dislodged from its usual habitat and is migrating into new surroundings, where sanitary conditions in camps or temporary abodes in the proximity of the factories is still far below par. This may gradually undermine the body resistance of the migrator and his family, and may result in an epidemic from

diphtheria similar to that which occurred in Halifax. The situation is aggrevated by the daily contact between adults of the rural and urban populations.

In view of the fact that the Schick test is a reliable means for detecting the susceptibility to diphtheria, a plea is made and a suggestion offered that the Schick test be performed on all employees upon their admission into the factories. Should they show positive reaction, they should be advised of the need of an immediate immunization. When this means of precaution is taken at an early stage, it might ward off a future epidemic of diphtheria, which might in turn cause a disruption in the production of ammunitions so greatly needed for our national defense. The good old adage, "An ounce of prevention is worth a pound of cure" holds very true here.

Medical science must go hand in hand with war production in foreseeing and preventing the slightest possibility of an epidemic among the workers and civilian groups, as it is well known that eighteen workers are required to keep one fighting man at the front.

SUMMARY

The susceptibility of adults to diphtheria, particularly in rural areas has been demonstrated: first, through the results of the Schick test performed in different localities on various population groups, as reported in the medical literature; second, by observations conducted by the author, on the results of Schick tests performed on approximately 10,000 adults; and third, by an analysis of the morbidity and mortality in Illinois, during the past five years.

The validity of the Schick test as a reliable tool in distinguishing susceptibles from immunes to diphtheria was discussed.

It was demonstrated that the susceptibility of adults to diphtheria varied from 45% to 80% in the rural areas. This corroborated the observations made by others.

Analysis of morbidity records showed the high rate of diphtheria among adults in the rural areas, as compared with that of the urban population, and the higher case fatality rate from the disease in the urban area in Illinois.

The occurrence of diphtheria epidemics more pronounced among adults was discussed.

Attention was called to the possibility of epidemics from diphtheria in Illinois, particularly in and around the newly established ammunition factories and ordnance plants. The acuteness of the problem of migrations of large numbers of diphtheria susceptibles from rural areas to crowded quarters was stressed and the contacts made daily with a large number of possible diphtheria carriers was pointed out.

The advisability of Schick testing and immunizing all susceptibles upon admission to work in all defense plants was suggested.

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When our friends are alive we hesitate to say much about them in their presence, except in after-dinner speeches. As soon as they are dead we are apt in a paroxysm of sympathy to overpraise their work.—*John Bland-Sutton.*

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

AN UNUSUAL CASE OF PRIMARY CARCINOMA OF THE LUNG

Bruno W. Volk, M.D., William Johnson M.D., F.A.C.S., and B. E. Malstrom, M.D.
GALESBURG

The incidence of primary carcinoma of the lung has been increasingly frequent in the last decade. According to Rosalm in sturing 4156 autopsied at the Yale University, School of Medicine, the ratio of pulmonary carcinoma to all other carcinomas increased from 7.4% during the period from 1917 to 1927 to 11% in the following decade.

Koletsky examined 100 cases of primary carcinoma of the lung during the period from 1927 to 1937, which constitutes 9.4% of 1064 cases of malignant tumors, carcinoma of the lung being second only to primary carcinoma of the stomach. It was suggested that the possible reasons for the increase of primary pulmonary carcinoma were the improved methods of diagnosis of clinicians and pathologists, as well as the increased attention given to this disease; and finally, we have also to consider the increase in the span of human life. Arkin and Wagner state that 20 years ago only 5% of all primary pulmonary carcinomas were diagnosed clinically, while today 50% are recognized during life. There is, however, little doubt that the increase of primary pulmonary carcinoma is real as observed in different hospitals, where autopsies have been performed under the same direction for a long period of time.

The possible etiological factors such as tuberculosis, metaplasia of the bronchial columnar epithelium after influenza, inhalation of irritating gases, radioactive substances or smoke, which are considered as the cause of primary carcinoma of the lung, could not explain the remarkably increased frequency of that tumor, because the majority of these cases give no definite etiologic reasons.

According to Fried, the cells of the primary pulmonary carcinoma originate from a common parent cell; this cell is always found in the basal layers of the bronchial epithelium. These cells are the only epithelial cells in the mucosa of the bronchial tree which are concerned with cell division and cell differentiation. Halpert and Pearson distinguish three types of primary carcinoma of the lung: (a) the squamous cell carcinoma (b) the columnar cell carcinoma and (c) the reserve cell carcinoma, so called when the tumor cells were of the same size. The nuclei of the cells of the third group were round, oval or elongated, the cytoplasm was scanty and the cells showed no particular arrangement. These cells can be transformed into squamous cells or columnar cells, or all three types may be present. Among 92 cases of cancer of the lung, Halpert and Pearson found 49 (53.26%) squamous cell carcinomas, 17 (18.47%) columnar cell carcinomas and 26 (28.25%) reserve cell carcinomas. The squamous cell carcinoma is generally considered as less malignant than the other forms and offers the best prognosis for early surgical removal. It is

more or less restricted to local extension with involvement of the bronchial lymph-nodes, while the other two types usually produce wide-spread metastases.

According to Roger 44% of the patients suffering from pulmonary carcinoma, gave as their first symptom, one that was not connected with the chest. In fact the primary tumor in many instances was not discovered before autopsy was performed. Very often the initial symptoms were the result of wide-spread metastases, exhibiting clinical manifestations which obscured the presence of a very small primary tumor.

Though much has been written about the clinical, roetgenological and pathological manifestations of primary pulmonary carcinoma, the following case deserves consideration because it was remarkable from the diagnostic, as well as from the pathological standpoint.

The patient was a white male, age 43 years. The family history was not remarkable, no cases of carcinoma were recorded. His previous history was uneventful. He was first seen by his doctor on June 7th, 1941, complaining of dyspnea without exertion. He admittedly felt perfectly well until the last days of May, 1941. From then on he had increasing dyspnea without cough, frequent attacks of slight pains in both sides of his chest and he was troubled with progressive fatigue; otherwise he had no complaints. He was working in a refrigerator factory and attributed his troubles to his work. The only positive findings were — diminished breath sounds, and diffuse coarse rales over both lung fields. The systolic blood pressure was 135 mm HG, and the diastolic 90 mm. The pulse was 116; the respiration 32 and the temperature normal. At this time a diagnosis of left heart failure was made and he was given routine treatment, without improvement. The patient was next seen on June 12, 1941, at which time he stated that his symptoms had been aggravated. The electrocardiogram revealed severe myocardial damage with no conduction deformity; the apical leads were abnormal. He could not walk without extreme dyspnea and the pains in his chest were almost continuous and most severe. He coughed slightly and expectorated a moderate amount of sputum, which was not bloody or purulent.

The patient was admitted to the hospital the following day, June 13, 1941. The physical findings were unchanged; his temperature remained normal, his pulse was 130, and his respiration had stepped up to 36. Examination of the blood, urine and stool revealed nothing unusual; the sedimentation rate was moderately increased. Examination of the sputum for tubercle bacilli was repeatedly negative. Examination of the blood revealed increase of the polymorphonuclear leukocytes to 16,000 cells; however the differential cell count was normal, as well as the red blood corpuscle count.

In a flat plate of his chest the diaphragm on the right side was drawn up to a remarkable degree. Both lungs showed a diffuse mottling, exhibiting a picture of multiple, circumscript, in some areas, confluent miliary nodules, which were esepcially dense in the base of the right upper lobe. There was no evidence of a circumscript, homogenous density. The costo-phrenic angles were movable and contained no exudate. The outline of the heart appeared to be normal. The roetgenologist interpreted the films as miliary tuberculosis of both lungs.

The patient deteriorated rapidly; the respiration increased to 40; attacks of severe dyspnea occured more frequently than before. He felt extremely nauseated, vomited at short intervals and complained of frequent severe headaches. Under symptomatic treatment he failed to improve and died on June 17, 1941, five days after admission to the hospital.

On autopsy we found a well developed, rather well nourished white male. The skin was of yellowish-gray, pale color. The thorax was barrel-shaped, the mid-line fat measured up to 10 mm in thickness. The external genitalia were normal. No edema could be found. The peritoneal serosa was smooth, moist and glistening and the peritoneal cavity was free. The percardial sac contained about 15 ccm of yellowish, clear fluid. The epicardium was soft and shiny. The myocardium was firm and purple-brown.

The valves and coronary arteries were normal. The endocardium was soft and shiny. The aorta showed a moderate amount of fatty degeneration of its intima.

The pleural cavity revealed moderate bilateral exudation of a turbid, yellowish-red fluid. Both pleurae were studded with numerous, tiny, flat,

grayish-white nodules, which were of the size of a lentil. On the cut-surface both lungs were grayish-red and rather dry. They showed a uniform mottling of all lobes. It took the form of multiple, circumscript miliary, grayish-white, rather firm nodes, scattered throughout the lung parenchyma. The nodules were of the size of

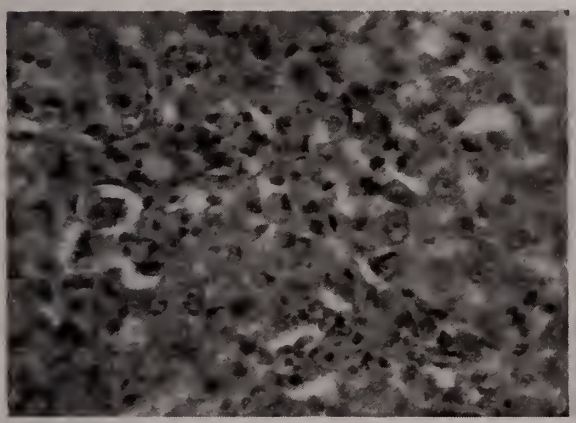


Figure 1. — Sections from one of the miliary carcinomatous nodules.

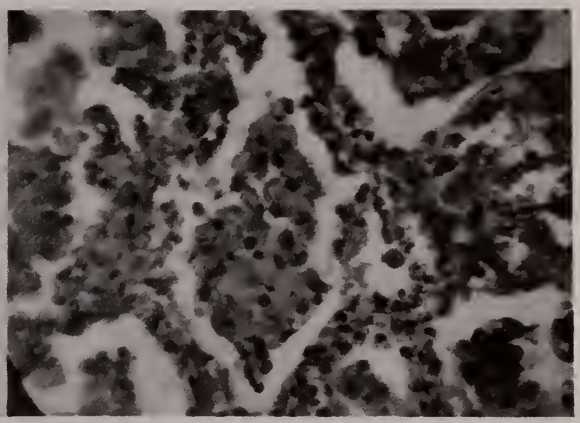


Figure 2. — Another miliary carcinomatous nodule; some of the carcinoma cells contain mucous.

from a pin-head to that of a lentil, tending here and there to coalesce to larger irregular shaped nodes, similar to the picture of miliary tuberculosis. It was impossible to demonstrate any relationship of the tumor to the bronchial tree. The bronchial mucosa was slightly swollen and hyperemic. The hilar lymph nodes were slightly enlarged and of rather firm consistency. On the cut-surface the glands were converted into a grayish-white, firm, homogenous tissue.

The liver was rather firm and smaller than normal. Its capsule was smooth and glistening, the edges were sharp. On section the surface was brown and the acini appeared decreased in size. The gallbladder, bile ducts and the pancreas showed no pathology. The spleen was soft and on transverse-section it revealed large and very distinct lymph-follicles. The kidneys were of normal size and moderately firm. The capsule stripped with ease from the smooth, grayish-red surface.

On the cut-surface the markings and the demarkation between the cortex and the pyramids were distinct. The mucous membrane of the renal pelvis and of the ureter were normal. The urinary bladder contained about 100 ccm of a yellow, clear, urine. The mucous membrane was reddish-gray and slightly congested, especially in the region of the trigonum. The prostate was normal. The esophagus, as well as the stomach, showed no pathology. The contents of the intestines revealed the presence of bile pigments. Their mucosa showed nothing remarkable.

The histological examination of the lungs revealed a diffuse invasion of the pulmonary tissue by flat polyhedral cells interspersed with some areas of cylindrical cells. The wall of the alveoli was generally preserved, in some areas, however, it was infiltrated by carcinomatous cells. The individual cells were concentrically arranged and showed a remarkable pleomorphism. They were polygonal and had a generous amount of a clear, rather pale staining cytoplasm. The nuclei, likewise, were large and round, stained heavily with hematoxylin and contained a distinctly visible nucleous. There were no signs of keratinization. In some areas the cells were cylindrical, had an abundant cytoplasm and small pycnotic nuclei, situated at the base of the cells, but gland formation could not be found. A considerable number of the tumor cells throughout all sections of both lungs was vacuolated, the cytoplasm was stretched by a central droplet of mucinous secretion, so that the nucleus was flattened to one side and only a thin film of protoplasm remained.

The vacuole was distinctly stainable with mucicarmine. The mucus secretion was limited to the single cells and mucus remained intracellular. The tumor cells were collected into



Figures 3 and 4. — X-ray pictures of the chest showing miliary distribution of the pulmonary carcinoma.

groups surrounded by a fibrous stroma, which did not penetrate between the cells of the group. The cells themselves were held together by intracellular bridges. Irregular mitotic figures were present in moderate amount. The extension through the lungs occurred by way of the lymphatics, the septa and the blood vessels. Many lymph vessels and lymph capillaries were obstructed by tumor cells, but some of the blood vessels showed carcinomatous infiltration of their lumen, also. The distribution of the carcinoma by means of the lymphatics explained the remarkable nodular involvement of the pulmonary parenchyma. Sections of the hilar lymph nodes revealed almost complete destruction of the lymphatic tissue and infiltration with the above described carcinomatous tissue.

Comment and Discussion: It is generally known that the primary carcinoma of the lung produces no signs or symptoms in about 15% of all cases. Therefore it is not surprising that this patient felt well until about two weeks before his death. This case, however, is of interest because of the peculiar miliary distribution of the tumor throughout both lungs, simulating miliary tuberculosis as beautifully shown in the flat plate of the chest. At autopsy the lungs did not permit the possibility of ruling out miliary tuberculosis by gross examination, as the distribution and appearance of the small nodules was absolutely uncharacteristic for pulmonary carcinoma.

The nodular involvement of the lungs in cases of primary carcinoma is comparatively rare. The miliary carcinoma or carcinosis is probably the result of local metastases. In this form one or both lungs is the seat of many poorly defined tumor foci from miliary to marble size. Compared to miliary tuberculosis the carcinomatous nodules are larger, whiter, more translucent and situated along the lymph channels. Although the tiny carcinomatous nodules of the above described case were scattered more or less homogenously throughout both lungs, there was an increased density of the arrangement of the nodules in the base of the right upper lobe. It is possible that the primary tumor started in this area, though the majority of these cases show that it is secondary to an undisclosed primary focus.

The morphological similarity to miliary tuberculosis of the above described case which deceived the roetgenologist was very remarkable. His oversight was easily explained after the gross

examination of the lungs. According to Simons this form of carcinoma can be differentiated from miliary tuberculosis which shows distinct small nodules rather than a network of continuous shadows and a multiformity of lesions with varying types of shadows. A differentiation, however, cannot be made between the lymphatic invasion of carcinoma of the lung and that arising from other organs such as breast, stomach, a.s.o.

The histological examination left no doubt as to the character of the tumor. The peculiar distribution of the growth is due to its spread through the perivascular or peribronchial lymphatics which were filled with tumor cells. The pleomorphism of the cells is not unusual as the different sections of a single tumor often contain cells and cellular arrangement of the most varied types. The mucous secretion may be limited to single cells or it may fill or distend the alveoli and lead to gelatinous changes. The bronchial mucosa contains a large number of cells which have the ability to produce mucus. In pulmonary carcinoma the presence of mucus is usually associated with the presence of more differentiated cubical or columnar cells, arranged around gland-like spaces, which point to the origin of the tumor cells from the mucus producing epithelial cells. This case showed no gland formation; the carcinoma was composed of undifferentiated, polyhedral cells mingled with cylindrical epithelium and large cells containing mucin as proven by special stain. It is well known that the carcinoma cells may preserve functions of the mother tissue. Ordinarily, if deriving from glands, they preserve the tendency for glandular structure primarily and the potency of secretion secondarily only. It is rare that a carcinoma as in this case, preserves the potency of cellular secretion, while completely losing the tendency for glandular structure. The peculiar gross appearance of the individual carcinomatous nodules has to be attributed to the production of a rather large quantity of mucus. The miliary type of primary pulmonary carcinoma was described before (Ewing, Boyd), however, the presence of mucin in the undifferentiated type of carcinoma of the lung is very remarkable, as no other similar cases were to be found in the literature.

Due to the short stay of the patient in the hospital and because of his critical condition, it was impossible to examine him as thoroughly as it would have been desirable. A bronchoscopy and a biopsy would no doubt have been helpful if the patient's condition had permitted their being done. However, even though the examination of the patient was not complete, this case was interesting from a clinical standpoint because it again proved the difficulty of the correct diagnosis of primary carcinoma of the lung; while the morphology and histology of this tumor, exhibiting an uncommon gross distribution and rare microscopical appearance, was of particular interest to the pathologist.

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The role of the general practitioner in the eradication of tuberculosis cannot be overemphasized. Mass programs of case finding in high schools, colleges, industry and racial groups are public health functions. But there are other categories that such drag-nets do not reach. One of these is the older third of the population. They constitute no single group to be rounded up for mass examination. Yet, they contain a higher percentage of infectious cases than any other age. The family doctor alone has direct access to this reservoir or community infection. To drain it effectively and speedily his aid is indispensable. Editorial, Tuberculosis Abstracts, Nov., 1942.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

J. P. Greenhill delivered the J. F. Y. Paine Address before the Texas Association of Obstetricians and Gynecologists on September 28th. His subject was "The Use of Synthetic Estrogens in Obstetrics and Gynecology."

Andrew C. Ivy, Nathan Smith Davis Professor of Physiology and Pharmacology of Northwestern University, has been appointed civilian director of the Naval Medical Research Institute at the naval medical center at Bethesda, Maryland. He will be in charge of all medical research for the navy.

Herbert L. Pettitt, Morrison, resigned on October 26th as Assistant Director of the State Department of Public Health, to return to private practice due to a war-time shortage of physicians in his home city.

At the October 14th meeting of the Mc Donough County Medical Society, Dr. C. P. McRaven was elected President and Dr. Archie Trummel of Bushnell was elected Vice-President. Dr. O. O. Christenson, Pathologist of the Methodist Hospital of Peoria, presented the program.

Ogle County Medical Society met in the new Warmolts' Clinic, Oregon, October 22nd. Major E. H. Quandt, Station Hospital, Camp Grant gave a very interesting and informative talk on Army Hospitals and his experience since early 1941. Election of officers was held. Dr. M. S. DuMont, Mt. Morris was elected President, Dr. W. E. Kittler of Rochelle, Vice President; A. R. Bogue of Rochelle, Secretary and Treasurer, and Dr. C. H. Schaller of Rochelle Censor for three years.

COMING MEETINGS

November 10 — Adams County Medical Society — Quincy — Evening — Raymond W. McNealy, M.D. — "Gall Bladder Disease"

November 10 — Effingham County Medical Society — Effingham — 6:30, Benwood Hotel — R. A. Tearnan, "Diagnosis and Treatment of Peptic Ulcer; Louis Loeffler, "Pathology of Peptic Ulcer"; John Madden, "Roentgen Ray Aspect of Peptic Ulcer"

November 13 — Will-Grundy County Medical Society — Joliet — Louis Joliet Hotel — 12:00 o'clock noon

November 17 — Macon County Medical Society — 6:30 P. M. — Decatur — Edward D. Allen — "Gynecology"

November 19 — Marion County Medical Society — St. Mary's Hospital — Centralia — 8:30 P. M. — Arrie Bamberger — "Treatment of Soft Tissue Injuries"

November 19 — Crawford County Medical Society — Robinson — Woodworth Hotel — 6:30 P. M. — J. J. Sievers — "Pneumonia"

November 20 — Will-Grundy County Medical Society — Joliet — 12:00 noon — Louis Joliet Hotel — Edward A. Oliver — "Dermatology"

November 27 — Will-Grundy County Medical Society

December 2 — Schuyler County Medical Society — Afternoon and evening — Rushville — James H. Hutton and Robert S. Berghoff

December 1 — Vermilion County Medical Society — Danville — Dinner 6:30 — Paul H. Holinger

December 4 — Will-Grundy County Medical Society — Paul Holinger — "Foreign Bodies in the Air and Food Passages"

December 8 — Adams County — Quincy — Evening — James H. Hutton — "The Diagnosis & Treatment of Common Endocrinopathies"

December 10 — Effingham County Medical Society — Benwood Hotel — Effingham — Evening

December 10 — Crawford County Medical Society — Woodworth Hotel — Robinson — Evening

December 11 — Greene County — Roodhouse — 6:30 P. M. — Arthur E. Walters

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MARRIAGES

Rex Decker Hammond to Miss Barbara Tyler, both of Chicago, at Little Rock, Arkansas, October 10, 1942. Dr. Hammond is a 1st Lieutenant in the army and Miss Tyler (Mrs. Hammond) is medical artist at Cook County Hospital, Chicago.

Charles W. Geiger to Mrs. Viola Karnstrom, both of Kankakee, Ill., in Bowling Green, Mo., June 29.

DEATHS

Joseph C. Beck, Chicago; University of Illinois College of Physicians and Surgeons, 1895. Former Consulting Otolaryngologist, Cook County Hospital, U. S. Veterans Hospital. At time of his death Senior Otolaryngologist, Michael Reese, Mt. Sinai and Henrotin Hospitals; Professor Emeritus, Laryngology, Rhinology and Otology at University of Illinois College of Medicine; Associate Dean in Otolarnygology, Illinois Charitable Eye and Ear Infirmary. Died October 20, 1942 at the age of 72.

James Blanchard, Creal Springs; Eclectic Medical College, Cincinnati, 1881. Died September 26, 1942 at the age of 86 years.

Dennis F. Brennan, Chicago; Northwestern University Medical School, 1886. Died of a heart ailment on October 21, 1942 at the age of 75 years.

Joseph Arkell Campbell, East Moline; St. Louis University School of Medicine, 1906. Served as a major in World War I. At one time managing officer of the East Moline State Hospital and later manager of the State Institution at Anna, Illinois. Was practicing physician at Marissa, Illinois, for many years. Died October 6, 1942 at the age of 60.

Steven J. Conway, Chicago; Loyola University School of Medicine, 1917. Superintendent of the Chicago Hospital. Died of heart disease on October 8, 1942 at the age of 49 years.

John P. Crotty, East St. Louis; St. Louis University School of Medicine, 1934. Died of a heart ailment on October 8, 1942, at the age of 33.

Carey Culbertson, Chicago; Northwestern University Medical School, 1898. Former professor of obstetrics and gynecology at Rush Medical College, and gynecologist of Cook County Hospital. Member of the Presbyterian and Norwegian Hospital staffs. Served as a major in the medical corps in World War I. Died October 9, 1942.

James Charles Egan, Chicago; Loyola University School of Medicine, 1915. Practiced medicine in Chicago for 36 years. Died October 3, 1942 at the age of 78.

Lincoln B. Griswold, Utica; Loyola University School of Medicine, 1923. Died Oct. 1, 1942 at the age of 46 years.

Winfield Scott Hall, Berwyn; Northwestern University Medical School, 1888. Was professor of physiology at Northwestern University for 24 years and author of numerous medical books. Was a member of the Society of Experimental Biology, the American Academy of Medicine, of which he served as president in 1905. Died October 2, 1942 at the age of 82.

Clarence A. Hercules, Harvey; Northwestern University Medical School, 1904. Member of staff of Oak Forest Infirmary for 20 years. Died October 24, 1942 at the age of 64.

Edward R. Herman, Chicago; National Medical University, Chicago, 1906. Died October 22, 1942 following an illness of several weeks. Age, 73 years.

John Bell Howe, Hines; Chicago Homeopathic Medical College, 1895. In office of Veteran Administration facility. Died Oct., 1942 at the age of 70.

Thomas D. Kaylor, Barry; Keokuk Medical College, 1895. Practiced medicine in Barry for more than 40 years. Died October 12, 1942 at the age of 79.

HARRY LYCAN, Vermilion; Marion-Simms College of Medicine, St. Louis, 1899. Coroner of Edgar County for ten years. Died following a heart attack on September 27, 1942 at the age of 69.

JAMES ELLIOTT MCCORNELL, Chicago; Illinois Medical College, Chicago, 1909. Former Gibson City resident. Died September 25, 1942, aged 65.

WILLIAM FREDERICK MYERS, Coal Valley; Kentucky School of Medicine, Louisville, 1892. Charter member of the Rock Island County Medical Society; had been honored for fifty years of medical practice. Member of Valley Masonic lodge more than fifty years, member of Moline consistory, and the Order of the Eastern Star. Died October 9, 1942 at the age of 74 years.

GEORGE E. PETERMAN, Chicago; Dearborn Medical College, 1904. Practicing physician in Chicago for many years. Died October 25, 1942 at the age of 71 years.

HERBERT ANTHONY POTTS, Chicago; Northwestern University Dental School, 1895, Northwestern University Medical School, 1901. Professor emeritus of oral surgery at the Northwestern University Medical and Dental Schools. He retired in 1939 after 34 years of service at the university. Senior oral surgeon at St. Luke's Hospital and former oral surgeon of Cook County Hospital. Served as a major in the medical corps in World War I. Died October 7, 1942 at 69 years of age.

JOHN FRED QUENZER, Chicago; Dunham Medical College, Chicago, 1901; Hering Medical College, Chicago, 1904; aged 79; died, July 27.

JOHN ALBERT ROBISON, Chicago; Rush Medical College, 1880. Retired from active practice several years ago. Was former president of the Illinois State Board of Health and one of the original members of the Presbyterian Hospital board. Died October 18, 1942 at the age of 85 years.

O. CHARLES SOMMERFIELD, Chicago; University of Illinois College of Physicians and Surgeons, 1909. Had practiced medicine in Chicago for 32 years. Died October 14, 1942, aged 59 years.

CARL H. THOMSEN, Dolton; Northwestern University Medical School, 1900. Died October 22, 1942.

EDWARD E. WOODSIDE, Marion; Rush Medical College, 1905. Died October 25, 1942 at the age of 66 years.

HOW SURGEON HELPED SAVE HOSPITAL

How a British surgeon helped save a hospital that had been bombed is described in *The Journal of the American Medical Association* for October 24 by the regular London correspondent of *The Journal* who reports that:

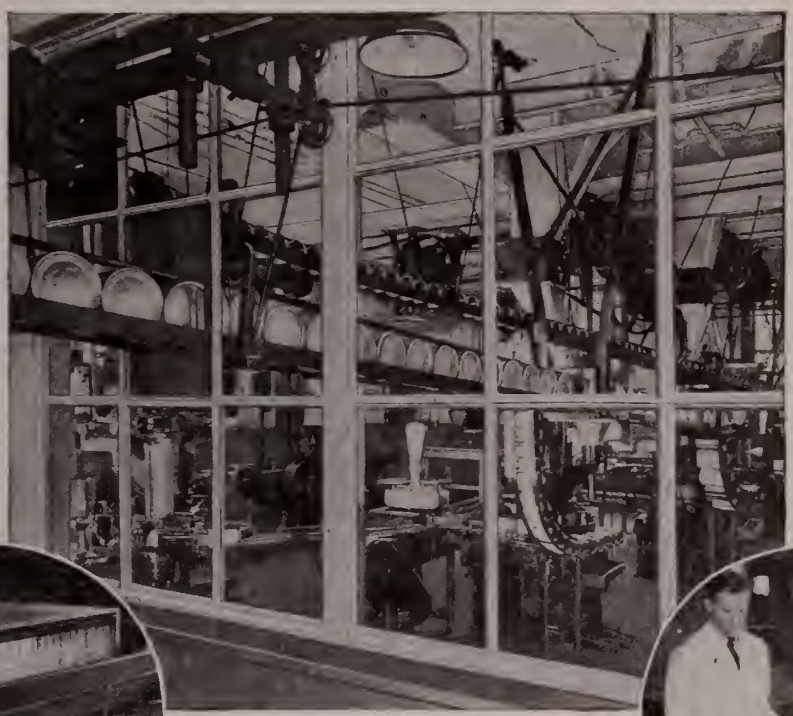
"High explosive and incendiary bombs fell on a hospital, setting it on fire. The house surgeon, Dr. Philip Baxter, wearing a dressing gown over his pajamas, climbed a fall pipe to the blazing roof. Then he used the girdle of his dressing gown as a rope to hoist up buckets of water, which were tied on by helpers below. He got the blaze under control. In leaping from the roof to a lower one he injured an ankle but went to the operating theater to attend the victims of the raid. When there a message came that an elderly woman was trapped under wreckage in another part of the town and that medical help was urgently needed. He went and had to crawl down a tunnel in the debris to administer morphine. He waited until she was extricated and sent to the hospital. He then hobbled back but was in great pain. While on his way a policeman lent his bicycle. Cycling was no less painful but was quicker. On arrival he returned to the operating theater and continued his work. Only after he had been on duty for several hours did his own injury receive attention. . . ."

It has been estimated that at 3 years of age 85 per cent of the nation's youngsters suffer from dental decay and that a few years later this may reach 97 per cent, James N. Miller, Washington, D. C., points out in a recent issue of *Hygeia, The Health Magazine.*

There can be no such thing as chronic pulmonary tuberculosis without a first infection. However, it is not usually the first infection that is important — what matters most is the subsequent superinfections and reinfections which should be guarded against in the infected group. David Zachs, M.D., Jour. of School Health, June, 1942.

Do not forget that of all the countless remedies, rest, alone, has stood the test of time. Gerald B. Webb, M.D.

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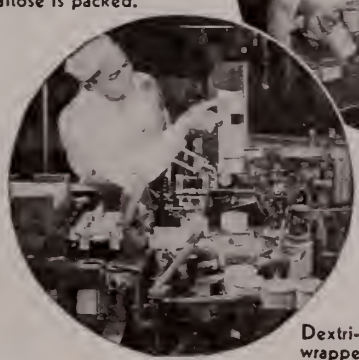
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Book Reviews

DAILY LOG. Colwell Publishing Company, Champaign, Illinois. Price $6.00.

The daily office log prepared by a physician for accurate and comprehensive medical records is now on the market for 1943. The compiling of income tax data is becoming more and more important as this nation progresses through the present emergency. Office records must be accurate and complete. All information must be available for use at the proper time, and this financial data can all be summarized month by month, and "at your fingertips" when needed.

The happy combination of appointment book and bookkeeping record with accompanying summary sheets will prove a labor saving and efficient method to maintain accurate office records. This "Log" is highly recommended for all physicians in civilian practice.

THE PREMATURE INFANT. Its Medical and Nursing Care. By Julius H. Hess, M.D., and Evelyn C. Lundeen, R.N. Octavo of 309 pages, illustrated. J. B. Lippincott Company, Philadelphia. 1941. Price $3.50.

Doctor Julius H. Hess has been one of the outstanding pediatricians in the problem of prematurity, and in this volume, has presented the medical profession with concise, workable data of inestimable value. From this work, teachers, students and nurses as well as physicians will gain valuable information.

More and more material is being printed dealing with the premature infant, and the attitude toward the problem of saving these tiny patients has changed in recent years. In all up to date libraries will be found symposiums giving methods of conserving the mortality and reducing the morbidity of the premature.

One of the leaders in this field has compiled valuable data, and the general practitioner will do well to have this volume on his shelves.

FROM INFANCY THROUGH CHILDHOOD. By Louis W. Sauer. Harper and Brothers, New York. 200 pages. 1942. Price $2.00.

This little volume written by the Assistant Professor of Pediatrics at Northwestern University Medical School, was compiled for the modern mother who wishes to give her baby the best possible care and start in life. It has as its aim, to teach her to cooperate intelligently with her pediatrician in the care of her child.

The average physician might well have this book on hand to loan prospective mothers. It would prove to be of assistance to him as well as to the pediatrician.

WAR MEDICINE. A Symposium. Edited by Winfield S. Pugh, M.D., New York, Philosophical Library. 565 pages. 1942. Price $7.50.

At the present time when all eyes are focused upon the war theatres of the world, this is an excellent book and a most opportune one. The fact that the book is a symposium dealing with many phases of war medicine, enhances its value.

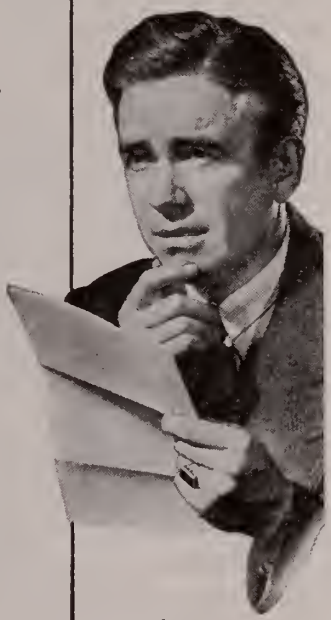
There are several chapters which will be of great interest to all gastro-enterologists. Among

(Continued on page 32)

Smoking...Nicotine

—and the Strain of **CURRENT LIFE**





A way to encourage patient's cooperation in adjusting smoking hygiene

IN these unsettled times, individuals may tend to display baffling, sub-clinical symptoms. The relationship of these symptoms to smoking and nicotine absorption can be an interesting subject for exploration.*

However, the success of the physician's program is dependent upon the patients' full cooperation.

Your recommendation of Camel cigarettes can be an aid in this direction. Millions of smokers favor slow-burning Camels for their extra "pleasure factor"—true mildness, rare flavor.

Given adequate support by patients, the physician may find case histories more reliable. In addition, the segregation of such data may facilitate valuable group analyses.

** The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941*
J. A. M. A., 93:1110—October 12, 1929
Brückner, H.—Die Biochemie des Tabaks, 1936

★ ★

"THE CIGARETTE, THE SOLDIER, AND THE PHYSICIAN," The Military Surgeon, July, 1941. Reprint available. Write Camel Cigarettes, Medical Relations Division, 1 Pershing Square, New York City.







Camel

—the cigarette of Costlier Tobaccos

BOOK REVIEWS (Continued)

this material are the chapters on fatigue in aircraft pilots, sudden compression injuries, nutrition of a soldier, discussion of liquefaction of solid foodstuffs for diets, the psychopath in the armed forces, and articles on Selective Service psychiatry.

One very interesting point brought out in the discussion of malingering, is that not only illness can be feigned, but the problem should also include study of the man feigning health to the detriment of the Army. Many a soldier feigns health in order to go somewhere with his company, and many an officer feigns good health in order to stay in the service and receive his promotion.

This volume is well written and very well assembled. It is a timely book and a valuable one.

Standard Nomenclature of Disease and Standard Nomenclature of Operations. Edited by Edwin P. Jordan, M.D., 1022 pages. American Medical Association, Chicago, 1942. Price $4.00.

The purpose of this volume is to establish a logical nomenclature for permanent designations of diseases and operations.

In 1928 it was initiated when the National Conference was founded. The responsibility for the revisions of this material was taken over by the American Medical Association in 1937, and this is the third edition.

It is the aim of this volume to include every disease which is recognizable clinically, and to attempt to avoid repetition and overlapping. English terms are employed wherever possible, and the method of classification is based on the portion of the body concerned.

A table of eponymic diseases lists the names of individuals which are associated with the different diseases. The book is intended especially for the use of hospitals and clinics, and can be highly recommended, as filling a definite need in this field.

Physical Chemistry For Students of Biochemistry and Medicine. By Edward Staunton West, Ph. D., Professor of Biochemistry in the University of Oregon Medical School. 368 pages. The MacMillan Company New York, 1942. Price $8.75.

The primary object of this volume is to present selected phases of physical chemistry recognized as basic to an understanding of biological phenomena. The entire field of animal biochemistry might be developed from consideration of the properties of protoplasm. The book contains material dealing with the structure of matter, osmotic pressure, the determination of pH; oxidation and reduction.

Undoubtedly this book fills a definite need, and for those working to acquire this knowledge, it should be appreciated.

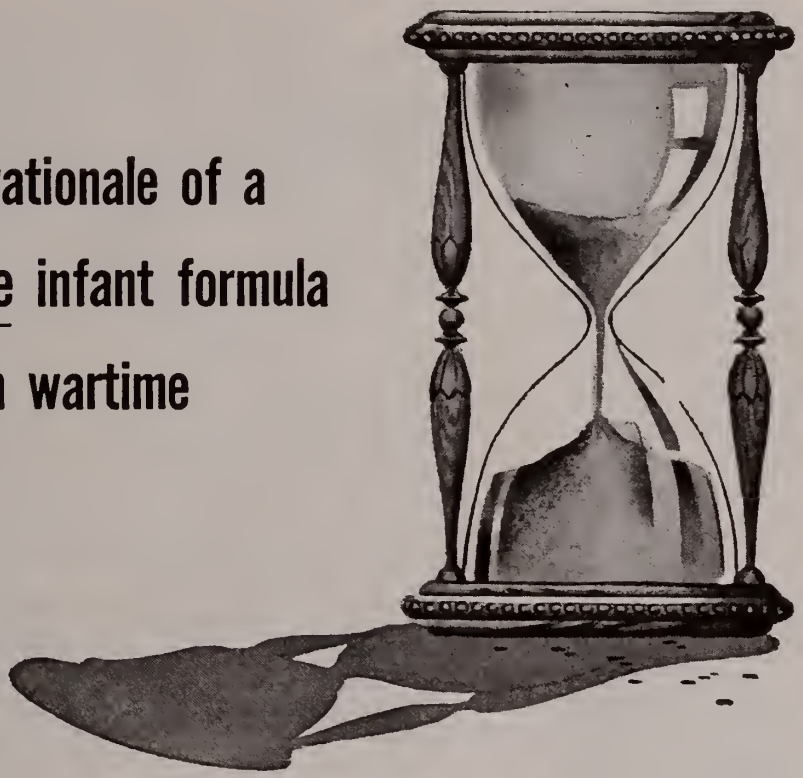
Synopsis of Ano-Rectal Diseases. By Louis J. Hirschman, M.D., F.A.C.S., Ex-Vice President A. M. A., Ex-Chairman, Section on Gastroenterology and Proctology, A. M. A., Ex-President American Proctologic Society; Chairman American Board of Proctology, Inc., professor of Proctology, Wayne University; fellow (honorary) Royal Society of Medicine; extra-mural lecturer on Proctology, Post Graduate School, University of Michigan; proctologist Harper, Charles Godwin Jennings, and Woman's Hospitals; consulting proctologist, Detroit City Receiving, Evangelical Deaconess, Wayne County Hospitals, Children's Hospital of Michigan, Detroit Tuberculosis Sanitarium, Detroit. Second Edition. 315 pages with 182 text illustrations and 12 color plates. The C. V. Mosby Company, St. Louis. 1942. Price $4.50.

This new edition of a volume which proved its popularity at the time of its first appearance, has many qualities to recommend it to physicians, and to students. The volume emphasizes diagnostic and therapeutic technique, and has been written without historical references, theoretical considerations and similar space-taking material.

The author has a background of some twenty years experience upon which to base many of his presentations. The data included is well organized, easy to read and presented accurately and concisely. The addition of a chapter on "Focal Infections of Ano-Rectal Origin" and

(Continued on page 34)

The rationale of a complete infant formula in wartime



YOUR TIME has never been so precious.

There has never been a greater need than now for the physician to seek out and use every possible timesaver.

Such a timesaver is Biolac.

Biolac formulas take practically no time to compute, because Biolac provides *completely* for *all* nutritional needs of the normal infant except vitamin C. There are *no extra* formula ingredients to be calculated.

Since Biolac requires only simple dilution with boiled water, as you direct, the possibility of formula contamination or accidental omission of ingredients by mothers is minimized. You are assured that the baby will get *all* the nutritional elements you prescribe . . . in amounts equal to or exceeding recognized optimal requirements.

For samples and professional information about Biolac, write Borden's Prescription Products Division, 350 Madison Ave., New York City.

NO LACK IN

BIOLAC

Borden's complete infant formula

★Biolac is prepared from whole milk, skim milk, lactose, vitamin B_1, concentrate of vitamins A and D from cod liver oil, and ferric citrate. It is evaporated, homogenized, and sterilized.

BOOK REVIEWS (Continued)

the complete revision of the former publication should give this little pocket volume value as a guide and source for reference.

War Gases. Their Identification and Decontamination. By Morris B. Jacobs, Ph.D., food, drug and insecticide administrator, U. S. Department of Agriculture, 1927. Chemist, Department of Health, City of New York, 1928: formerly lieutenant, U. S. Chemical Warfare Service Reserve. 180 pages. Interscience Publishers, Inc., New York. 1942. Price $3.00.

When the subject of civilian defense, ever growing in importance, comes up for discussion, the subject of poison gas and its uses against the home front comes in for its share of discussion and speculation.

This little book is concerned primarily with civilian defense against this type of modern warfare and is written for civilian officials to whom the duty of adequate protection for our population has been delegated.

The volume contains information concerning toxic gaseous of liquid materials which have been used in warfare, or which may be employed in the future. References are given as sources for this information, and several classifications of the different materials are presented. There are descriptions of the chemical and physical properties and the toxicity of each substance. Information is also included relative to the effect on clothes, machinery, buildings and roads, water and food supplies, and also on methods of detecting. Also included are chapters on various methods for decontamination of polluted materials and regions. The material is well organized and the volume can be highly recommended for reference and to fill the need for which it was written.

Surgery of the Ambulatory Patient. By L. Kraeer Ferguson, A.B., M.D., F.A.C.S., Lieutenant Commander, Medical Corps, United States Naval Reserves; Assistant Professor of Surgery, University of Pennsylvania; Assistant Surgeon, Hospital of the University of Pennsylvania: Surgeon, Philadelphia General Hospital and Doctors Hospital. With a Section on Fractures by Louis Kaplan, A.B., M.D., F.A.C.S., Associate in Surgery, University of Pennsylvania. 923 pages with 645 illustrations. J. B. Lippincott Company, Philadelphia and London, 1942. Price $10.00.

This work is divided into three parts: the first a more or less general discussion of typical lesions with a description of cause, course and care; the second part deals with regional surgery, and the third part discusses fractures and dislocations and their treatment in ambulatory cases.

Because of the fact that ambulatory surgery is performed very often by younger men and by the general practitioner, the author addresses this volume more or less to them, and gives to them a tremendous amount of excellent information from his own experiences.

Interesting to note is the author's comment that the surgeon who might be the first to recognize the case of acute appendicitis and insist on surgery, might be the one to overlook the importance of a small malignant growth.

This book is an addition to any library as a valuable reference source or as reading material for the general practitioner or younger physician starting into practice.

Pathology of the Oral Cavity. By Lester Richard Cahn, D.D.S., associate professor of dentistry (oral pathology), Columbia University; Fellow of the American Association for the Advancement of Science; Fellow of the New York Academy of Dentistry. 240 pages. The Williams & Wilkins Company, Baltimore, 1941. Price $5.50.

This volume covered adequately and briefly the lesions of the oral cavity that are commonly seen in everyday practice. It is written in a clear concise manner, is practical and usable. The material contained in the book dealing with oral soft tissue lesions associated with avitaminoses is most timely and calls attention to the fact that oral pathological conditions are an aid in the diagnosis of endocrine dysfunction or avitaminoses.

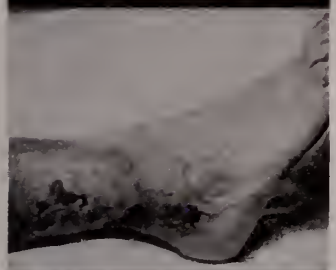
The book can be recommended highly for physicians or dentists desirous of becoming familiar with oral pathology.

(Continued on page 36)

CHRONIC ULCERS

The increased peripheral circulation which follows the application of Mecholyl Chloride by the method of ion transfer (iontophoresis) often halts the extension of the lesion and promotes healing. Amputation may at times be avoided by the early and persistent use of Mecholyl Chloride.

Varicose ulcer before Mecholyl Chloride treatment (Feb. 9)



Ulcer partially healed (April 10)



Ulcer completely healed (May 9)



an effective

PERIPHERAL VASODILATOR

MECHOLYL CHLORIDE

REG. U. S. PAT. OFF.

(Acetyl-beta-methylcholine Chloride Merck)

Council *Accepted*

Mecholyl Chloride is accepted by the Council on Pharmacy and Chemistry of the American Medical Association for the treatment of

- **Chronic Ulcers**
- **Raynaud's Disease**
- **Scleroderma**
- **Chronic Rheumatoid Arthritis**
- **Vasospastic Conditions of the Extremities.**

Literature on Request



ION TRANSFER (Iontophoresis) APPLICATION

The application of aqueous solutions of Mecholyl Chloride by the method of ion transfer (iontophoresis) to introduce this drug into the tissues by means of direct (galvanic) current is recognized as the best means to obtain the local effect of the drug on the circulation in the extremities.

Reinforced asbestos paper applied



Electrode placed over paper



Fully bandaged



MERCK & CO. Inc. *Manufacturing Chemists* **RAHWAY, N. J.**

BOOK REVIEWS (Continued)

A Textbook of Surgery. Edited by Frederick Christopher, M.D., F.A.C.S., Associate Professor of Surgery, Northwestern University Medical School. Third Edition. 1764 pages with 1538 illustrations on 771 figures. W. B. Saunders Company, Philadelphia and London, 1942. Price $10.00.

This well illustrated and well written third edition gives graduates and undergraduates vital information on many subjects. One hundred ninety-five authors have contributed, each in his own field, to present a wealth of excellent material. The newer data on chemo-therapy and the subject of war wounds are included, with the Orr-Trueta method of treating fresh war injuries stressed.

The list of references is up to date and well selected, and would tend to encourage further investigation and study. This text is a valuable source book and a definite contribution to medical literature.

Advances in Internal Medicine, Volume I. Edited by J. M. Steele, M.D., 292 pages. Interscience Publishers, Inc., New York. 1942. Price $4.50.

This book represents the first volume of a new series of reviews of progress in various fields of internal medicine. The men who have contributed to this work are outstanding in each phase discussed. The volume covers a number of subjects in which recent progress has been made, and offers the internist not actively engaged in research, an opportunity to become acquainted with new findings.

This work can definitely be considered a contribution to the physician's library, and future volumes will be anticipated with interest.

Synopsis of Materia Medica, Toxicology and Pharmacology for Students and Practitioners of Medicine; By Forrest Ramon Davidson, B.A., M.Sc., Ph.D., M.B., Medical Department, Upjohn Company; Formerly Assistant Professor of Pharmacology in the School of Medicine, University of Arkansas. Second Edition with 45 illustrations including 4 in color. The C. V. Mosby Company, St. Louis. Price $5.75.

Thorough and complete information regarding drugs which should become a part of the knowledge of physicians has been well assembled and presented in this volume. The drugs selected for discussion are those which have established their usefulness and effectiveness. All superfluous and unnecessary material has been eliminated, thus producing a handy reference book for the general practitioner as well as the student of medicine.

Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

When Doctors are Rationed. By Dwight Anderson, Director Public Relations, Medical Society of the State of New York, and Margaret Baylous, Therapist, Charleston General Hospital, Charleston, West Virginia. Coward-McCann, Inc., New York. Price $2.00.

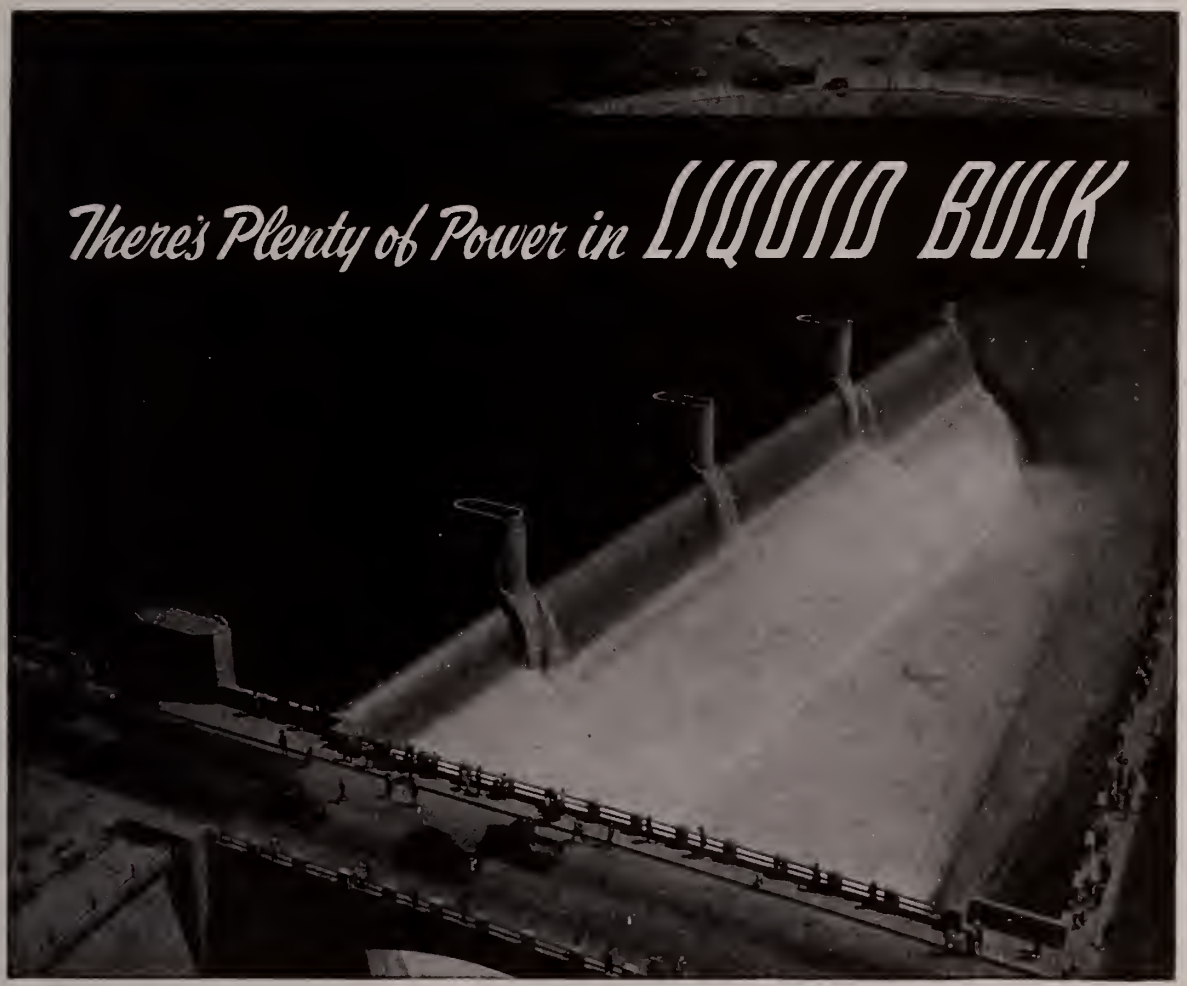
Military Surgical Manuals. National Research Council. Ophthalmology and Otolaryngology. Prepared and Edited by the Subcommittees on Ophthalmology and Otolaryngology of the Committee on Surgery of the Division of Medical Sciences of the National Research Council. Illustrated. W. B. Saunders Company, Philadelphia and London. 1942.

Problems of the Aging. Biological and Medical Aspects. Second Edition. A Publication of The Josiah Macy, Jr. Foundation. Edited by E. V. Cowdry, Washington University, St. Louis, Mo., The Williams and Wilkins Company, Baltimore, 1942. Price $10.00.

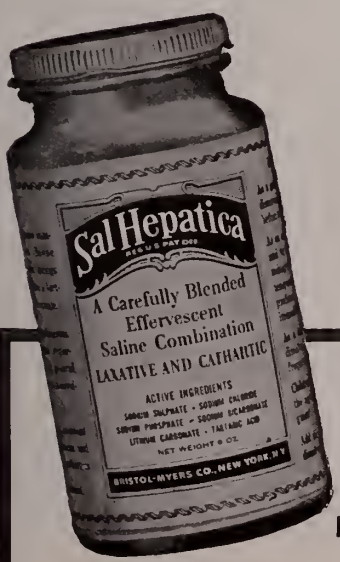
You Must Relax. A Practical Method of Reducing the Strains of Modern Living. By Edmund Jacobson, M.D., Revised Edition. Whittlesey House, McGraw-Hill Book Company, Inc., New York and London. Price $1.75.

Sulfanilamide and Related Compounds in General Practice. By Wesley W. Spink,

(Continued on page 38)



. . . for moving industrial wheels or INTESTINAL WASTE

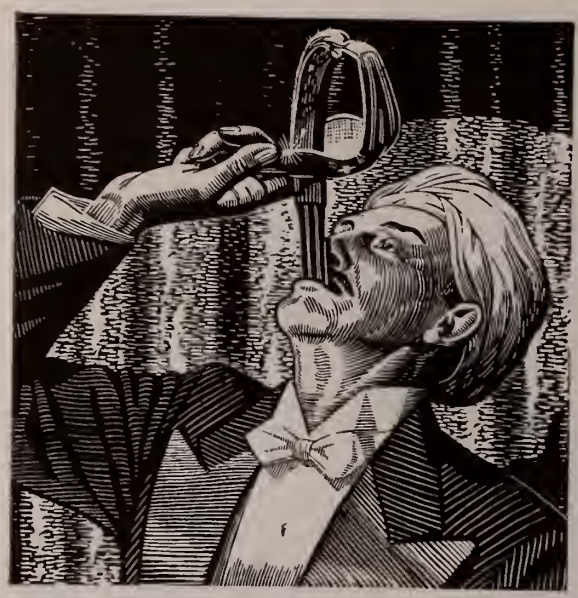


Sal Hepatica plus water, taken as suggested, creates temporarily unabsorbable liquid bulk in the costive bowel . . . for gentle stimulation of peristalsis, smooth flushing and lubrication, and improvement of water balance. It's a modern method for prompt and thorough removal of alimentary waste. The promotion of bile flow by Sal Hepatica, and its aid in relief from simple gastric distress, also deserve consideration.

If you've ever taken Sal Hepatica yourself, you know how pleasant and refreshing it is. A request will bring you literature.

SAL HEPATICA *supplies Liquid Bulk to Flush the Intestinal Tract*

BRISTOL-MYERS CO. • 19RR West 50th St., New York, N. Y.



PICTURE OF A PATIENT WITH *Pharyngitis*

When your patients with pharyngitis, tonsillitis or aphthae complain of feeling as if they had swallowed a sword, NUPORALS, "Ciba," offer quick relief. Containing the well-known anesthetic, Nupercaine*. These lozenges produce a prolonged local anesthesia of the mucous membranes of the oral cavity and throat when dissolved in the mouth.

Further suggested uses for NUPORALS* include facilitating pharyngeal and laryngeal examinations, easing the passage of a stomach tube, curtailing pain induced by denture irritation or surgical trauma.

NUPORALS

BOXES OF 15 **BOTTLES OF 100**

*Trade Mark Reg. U. S. Pat. Off. The word "Nuporals" identifies throat lozenges of Ciba's manufacture, each lozenge contains one mgm. of Nupercaine, "Ciba."

CIBA PHARMACEUTICAL PRODUCTS, INC.
Summit **New Jersey**

C · I · B · A

BOOKS RECEIVED (Continued)

M.D., F.A.C.P., Associate Professor of Medicine, University of Minnesota Medical School. The Year Book Publishers, Inc. 304 South Dearborn Street, Chicago. Price $3.00.

MEDICAL PARASITOLOGY. By James T. Culbertson, Assistant Professor of Bacteriology, College of Physicians and Surgeons, Columbia University. Columbia University Press, Morningside Heights, New York. 1942. Price $4.25.

THE MEDICAL CLINICS OF NORTH AMERICA. The Boston Number. September, 1942. Symposium on Specific Methods of Treatment. W. B. Saunders Company, West Washington Square, Philadelphia and London.

DAILY LOG, 1943. Designed by a Physician for Physicians. Colwell Publishing Company, Champaign, Illinois. Price $6.00.

CIBA AWARDED MINUTE MAN FLAG

In recognition of more than 95 per cent participation in the federal payroll savings plan, a Minute Man flag has been presented to the Ciba Pharmaceutical Company of Summit, N. J., by the United States Treasury Department War Savings Staff.

The presentation was made by W. H. Hassinger, Deputy Administrator of the War Savings Staff, and a speech of acceptance was delivered by J. J. Brodbeck, Executive Vice-President and General Manager of Ciba.

Two employees of the company, Alice Christensen and Carmello Terranova, accepted the flag from Mr. Hassinger in behalf of Ciba.

In responding to Mr. Hassinger's presentation address, Mr. Brodbeck described the need for "a complete and unselfish dedication of all our efforts to the successful prosecution of the war on the home front."

Americans today, Mr. Brodbeck warned, must work "not only for our own good but for the good of all." He urged continued participation in the war savings program by all Ciba employees.

Three divisions of Ciba which had attained a 100 per cent participation in the payroll savings plan were presented with Minute Man banners by Mr. Brodbeck.

Ciba's chemical Manufacturing department re-

(Continued on page 40)

Men and Women on the "Home Front" need *Vitamin Reinforcement*



The government recognizes the need for adequate daily intake of the vitamins, and has established quantities of the known essential vitamins which are necessary for normal function.

Governmental agencies list the following as minimum daily requirements.

Vitamin A	4000 U.S.P. Units
Thiamine (B_1)	1 mg.
Riboflavin (B_2)	2 mg.
Nicotinamide	(10 mg.)**
Ascorbic Acid (C)	30 mg.
Vitamin D	400 U.S.P. Units

***Suggested by the Committee on Food and Nutrition of the National Research Council.*

Each capsule of PENDRON contains all of these vitamins in the amounts recommended by official governmental agencies. *In addition*, PENDRON contains the recently discovered vitamin B factors—vitamin B_6 (Pyridoxine Hydrochloride) and Calcium Pantothenate (Filtrate Factor).



*Reg. U. S. Pat. Off.

Each capsule of PENDRON contains:

Vitamin A (Fish Liver Oil)	4000 U.S.P. Units
Vitamin D (Activated Ergosterol—Whittier Process)	1000 U.S.P. Units
Vitamin B_1 (Thiamine Hydrochloride) 333 U.S.P. Units	1 milligram
Vitamin B_2 (Riboflavin, Vitamin G) 800 S-B Units	2 milligrams
Vitamin B_6 (Pyridoxine Hydrochloride)	1 milligram
Vitamin C (Ascorbic Acid) 600 U.S.P. Units	30 milligrams
Niacin Amide (Nicotinamide, Pellagra-Preventive Factor)	20 milligrams
Pantothenate Calcium (Filtrate Factor)	1 milligram

Available in bottles of 30 capsules—full month's supply

PENDRON is made only in the distinctive two-color gelatin capsule.

Products of Nutrition Research Laboratories are promoted only through the medical profession.

NUTRITION RESEARCH LABORATORIES

CHICAGO

Industrial Workers with LAME BACK

Often Put Back On Job Quickly

by means of a

SPENCER SUPPORT

Higher morale—greater efficiency—longer hours of work with less fatigue often follow when a worker wears a Spencer Support designed especially for him (or her).

Spencers designed for patients with lame back restore balance — lessen movement of part when desirable—afford protection — support abdomen. Frequently, instantaneous relief is experienced.



Spencer Supports are designed of *non-stretchable fabric.* Spencer designers have *never* used rubber to make a corset fit or as a means of support. All Spencers are light, flexible, easy to slip on and adjust—readily laundered—exceptionally durable. They permit perfect freedom action.



Every Spencer is *guaranteed* never to lose its shape. (Ordinary supports soon stretch out of shape and become useless before worn out.)

For service at patient's home, your office or hospital, look in telephone book under "Spencer Corsetiere" or write to us.

Pictured above—*Spencer Socro-iliac Support for women. A pod is held snugly ogoinst socrum by meons of flot bonds thot encircle pelvic girdle inside gorment ond merge outside.*

At left—*Spencer Support for Men. Con be slipped on in a jiffy, and adjusted to whotever degree of support is required by means of flot topes and slides.*

May We Send You Booklet?

SPENCER *INDIVIDUALLY DESIGNED*

Abdominal, Back and Breast Supports

SPENCER, INCORPORATED,
137 Derby Ave., New Haven, Conn.
In Canada: Rock Island, Quebec.
In England: Spencer (Banbury) Ltd., Banbury, Oxon.

Please send me booklet, "How Spencer Supports Aid the Doctor's Treatment."

..... M.D.

FLAG AWARD (Continued)

ceived an individual Minute Man banner with a rosette. In making this award to Donald Mundwiler of the department, Mr. Brodbeck said that its employees were contributing more than 10 per cent of their total earnings each week. This was the first of the Ciba departments to attain this goal.

Mr. Brodbeck also presented Minute Man banners to Miss Marian Davis for the office and clerical force and Harry Bosshard for the maintenance department.

Company employees attended the ceremonies in working clothes. Guests included Summit officials and civilian defense leaders.

SHOULD DOCTORS TELL THE TRUTH

Not infrequently in the practice of medicine such a problem as this arises: A woman with a suspicious lump in her breasts consults a doctor. She is accompanied by her daughter or a relative or friend who, in a private interview, requests the doctor not to tell the patient that she has cancer, if this is the diagnosis, because the patient will be profoundly shocked if she knows the truth. The doctor is urged to inform the patient that the tumor is benign, even if he believes it to be cancer.

Many years ago, the late Dr. Richard C. Cabot conducted an investigation as to the wisdom of truthfully informing patients about their disease. Using as controls patients who were purposely deceived about their condition, he concluded that from the clinical standpoint alone the patients who were told the facts seemed to do better than those who were deceived. If a policy of deception is deliberately pursued, the patient sooner or later usually learns the facts. There can be no intelligent cooperation in the treatment. The relative or friend will unconsciously lose respect for the veracity of the doctor, whether he be family physician or surgeon. If in the future the daughter has a lump in her breast and goes to the same doctor and he tells her that the growth is not malignant, the daughter will think he is deceiving her, too. How is she to know when he is telling the truth?—"Guest Editorial" *by J. Shelton Horsley, M.D., in the Virginia Medical Journal.*



Commando raids are dramatic and do their share in helping us win the war. Less spectacular, but equally important to Victory, is the role of nutrition in building a strong hard-hitting America.

COCOMALT, the enriched food drink, is doing its part in the all-out effort toward better states of nutrition. For, COCOMALT contains vitamins A, B_1, D and the minerals calcium, phosphorus and iron . . . all essential factors in well-balanced diets.

More and more physicians are recommending this delicious food drink for the entire family. The rich, full flavor of COCOMALT, either hot or cold in milk, is a delightful drink for those who will not ordinarily drink milk alone.



Cocomalt

ENRICHED FOOD DRINK

R. B. DAVIS COMPANY, Hoboken, N. J.

MEDICAL COLLEGES TO GRADUATE RECORD NUMBER IN NEXT 3 YEARS

Accelerated Curriculum To Meet War Needs Will Result In 21,029 Physicians Being Graduated By Approved Schools By 1945

During the next three years 21,029 students will be graduated by approved medical schools of the United States as a result of accelerated programs initiated to meet the unprecedented demand for physicians brought about by the war. This estimate is contained in the forty-second annual presentation of educational data by the Council on Medical Education and Hospitals of the American Medical Association, published in the August 15 issue of *The Journal* of the Association. This is "5,082 more than would have graduated without the adoption of the accelerated programs," the report says. "There are in addition approximately 220 students from the United States in the medical schools of Canada. With the adoption of the accelerated programs by these institutions it is anticipated that practically all of this group will also be graduated by June 30, 1945.

"Never before in the history of this country have as many as 21,000 physicians been graduated from its medical colleges within a three year period.

"In a previous issue of *The Journal* it was estimated that the total number of deaths of physicians in the United States during 1941 was 3,460. It is difficult to determine what the over-all effect of the war will be on the annual deaths of physicians. However, the estimated number of graduates of the approved medical the annual deaths of physicians during recent schools during the next three years, based on years, provides more than two graduating physicians for every death.

"It is comforting to realize that, rather than permit this war to interfere with the education of physicians, the federal authorities in cooperation with medical schools have adopted programs which will increase the output of physicians and at the same time retain the normal curriculum without any material lowering of standards. . . .

BILE ACID THERAPY

In Cholangitis

Acting directly upon the liver cells, Decholin (dehydrocholic acid) leads to an increase of 100 to 200 per cent in the amount of bile secreted. This hydrocholeretic action exerts a flushing influence upon the bile ducts,[1] and has been successfully employed in the treatment of noncalculous cholangitis for the removal of mucous and purulent accumulations.

Lauda[2] recommends an initial dose of Decholin sodium of 3 cc. (0.6 Gm.) for two days, together with antispasmodic treatment. If local symptoms of the bile ducts do not appear after the first injection, 10 cc. (2 Gm.) may be given on the third day, and repeated on the four following days. It is then advisable to interrupt this treatment for a short time. Oral treatment with Decholin tablets has a milder effect and is useful for prolonged medication.

Decholin and Decholin sodium are contraindicated in complete obstruction of the common or hepatic bile duct.

1. Ivy, A. C.: J. A. M. A. 117:1151 (Oct. 4) 1941.

2. Lauda, E.: Cholangitis, in Piersol, G. M.: Cyclopedia of Medicine, F. A. Davis Co., 1940 vol. 4 p. 228.

Riedel-de Haen, Inc. New York, N. Y.

Decholin

"Medical schools of the United States have recognized that the national war emergency has created the need for a larger number of well qualified physicians. All but four medical schools have initiated an accelerated program to increase the supply of physicians for the Army, the Navy and the civilian population. The plan provides for the utilization of the long summer ing the schedule throughout the calendar year, the four year medical course is completed in three years. It should be possible for medical schools to maintain the quality and quantity of instruction which they have given in the past. The eligibility requirements for admission to medical schools have not been lowered from the present minimum standards set by the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association.

"Fifty-three schools have adopted the accelerated curriculum involving both the acceptance of entering students and the graduation of a class every nine months. Ten schools will graduate a class every nine months during the next

(Continued on page 44)

Joining the Armed Forces?

You'll want to keep right on receiving your Journal and we are anxious to continue sending it to you. No matter where you go, or how often your location is changed, we'll get your Journal to you if you will do one thing —

send us a card telling us of each change of address, including your number and post office at point of embarkation in case of foreign service.

FOR DOCTORS AT HOME: — Please advise of changes in address promptly to save your Society the cost of Journals and return postage on copies sent to old addresses.

Send Changes to 30 N. Michigan Ave., Chicago, Ill.

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Thyroid Extract
(thyroglobulin)

Dependable Potency
(iodine 0.62%)

Lower Toxicity
(better tolerated . . . less heart-stimulating effects)

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WINNETKA, ILLINOIS

A General Sanitarium Well Equipped

Maintained for the treatment and care of medical diseases, disabilities incidental to old age, and convalescents.

SEPARATE UNIT

Devoted to treatment of nervous and mental illnesses, alcoholism and drug addiction.

FORREST G. SHUFFLEBARGER, M. D.
Medical Director

MEDICAL COLLEGES (Continued)

three years but will admit entering classes on an annual basis. . . . Eight schools of the basic medical sciences have adopted an accelerated program. . . . Two schools . . . accelerated the senior year during 1941-1942 and graduated these students in March. The completion of the senior year was advanced from June to May 1942 by fourteen schools. . . .

"Licensure requirements in forty-one states, the District of Columbia, Alaska and Puerto Rico permit the granting of licenses, or have been so modified as to permit admission to licensure, of graduates who have completed the accelerated courses of training in recognized medical schools. In seven states, Georgia, Illinois, Kansas, Michigan, Nebraska, New Jersey and South Carolina, existing statutory provisions require modification, probably by legislative action, before licenses can be granted to graduates who have completed the accelerated course of medical education. . . ."

The report points out that the accelerated program has brought many problems to the medical students, prominent among which is that of finance for those with limited means. The long summer vacation period during which many students earned sufficient funds to permit them to continue their educational program has been eliminated, the report says. It points out that, as recently reported in *The Journal,* the W. K. Kellogg Foundation has offered each of the medical schools an immediate grant of $10,000 to be used as scholarships and loans and that grants of $5,000 have been made to the schools of the basic medical sciences which offer only the first two years of the medical course. The foundation also has made grants to certain schools of dentistry, public health and nursing and it is planned that payments on loans from the funds will be made directly to the schools, thus providing for all time a revolving loan fund for deserving students.

"This action by the W. K. Kellogg Foundation," the report says, "undoubtedly represents the largest single contribution that has ever been made in this country to enhance the opportunities for deserving but financially handi-



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capped medical students to complete their medical education.

"Sponsored chiefly by the American Council on Education, a program was recently initiated to secure federal funds in the form of loan funds which might be made available not alone to medical students but to certain other technical and professional students following an accelerated program. Congress voted favorably on the proposal, and $5,000,000 has been made available for this purpose. . . ."

Another war aspect of medical education is pointed out in the report which says that "One of the contributions of medical education to the war has been the organization of affiliated hospital units by the medical colleges of this country. The various medical colleges participating in this program are providing for the Army fully organized hospital staffs composed of unusually competent men in the various specialities, accustomed to working together and prepared to assume the medical responsibilities incident to the conduct of an army hospital. . . . Forty medical schools have organized such hospital staffs. Of these, four schools have each organized two such staffs. These affiliated units are of three types, general hospitals, evacuation hospitals and surgical hospitals."

Regarding developments in medical education, the report points out that "In the United States sixty-six approved four year medical schools and ten approved schools of the basic medical sciences carry the responsibility for the professional education of the physicians of this country. In times of war these heavy responsibilities are multiplied manyfold. The facilities of the medical schools have been taxed to the utmost by approximately a 10 per cent increase in the size of entering classes and by the institution of the accelerated programs. The loss of many faculty members through active service with the military forces and hospital units and the decrease in the resident personnel of the teaching hospitals have placed even further burdens on the permanent teaching staff.

"No basic changes have been made in the established medical curriculum because of the

(Continued on page 46)

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MEDICAL COLLEGES (Continued)

accelerated programs now in operation, although courses have been surveyed and an attempt has been made to eliminate duplication of work and to insure better correlation of subject matter. Innovations have been introduced which are designed to increase the practical value of medical school programs.

"Certain subjects peculiar to war have been added to the curriculum. Prominent among the subjects which are being given special attention are military medicine, first aid, tropical medicine, the study and treatment of war wounds and industrial medicine. . . .

"The budgets of twelve schools have been materially increased. An aggregate annual increase of $424,874 has been allotted to these schools ranging from $1,090 to $95,886. Eight of these schools have received increases in excess of $22,000 and five over $50,000. . . ."

The report lists sixty-four recognized medical schools in the United States in addition to two which are on probation. The University of Arkansas School of Medicine has been on probation since Dec. 4, 1939 and the University of Texas Medical Branch, Galveston, has been on probation since June 6, 1942. Approval of the University of Georgia School of Medicine was withdrawn Feb. 15, 1942 without prejudice to the students enrolled as of Sept. 1, 1942, thus providing protection to all graduates up to and including June 1945, the report explains. Nine recognized Canadian medical schools are also listed in the report. There are ten approved schools of the basic medical sciences in the United States and one in Canada. However, the University of North Dakota School of Medicine, Grand Forks, and the University of South Dakota School of Medical Sciences, Vermillion, have been on probation since May 13, 1939.

There were 6,914 freshmen enrolled in eighty-five medical schools of the United States and Canada for the session 1941-1942; the sophomore enrolment numbered 5,992, juniors 5,640, seniors 5,445, and fifth and sixth year students in Canadian schools 276 and 239 respectively. Altogether, 24,884 students were studying medicine in the medical schools of the United States and Canada during the session 1941-1942; of these, 22,031 were enrolled in medical schools in the United States.

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During the period July 1, 1941 to July 1, 1942 the degree of Doctor of Medicine was awarded to 5,702 students, 5,163 receiving the degree from medical schools in the United States and 539 from Canadian faculties of medicine.

As for distribution of students and graduates by sex, sixty-eight medical schools in the United States had both men and women students, of which fifty-seven had women graduates. Nine vacation as a teaching period, and, by continu- faculties of medicine of Canada had both men and women students, and six had women graduates during the session just closed.

Male students in the United States numbered 20,867 and included 4,884 graduates; female students numbered 1,164 and graduates 279. There were enrolled in Canadian schools 2,684 men and 169 women, of whom 513 were men graduates and 26 women.

The largest number of women enrolled in coeducational institutions in the United States was 41 studying at the University of Illinois College of Medicine. The only medical school in the United States which teaches women students exclusively is the Woman's Medical College of Pennsylvania. All but six of the seventy-seven medical schools in the United States admit women students. The Hahnemann Medical College of Pennsylvania accepted women students for the first time in 1941-1942 and admitted 10. Women students constituted 5.3 per cent of the total student enrolment during the past year. The enrolment of women in 1941-1942 was an increase of 18 over the previous year. There were 279 women graduates, or 5.4 per cent of the total number of graduates. In the eighteen years since 1925, 4,080 women have received degrees in medicine. It has been recently estimated that there are about 7,500 women physicians in the United States.

Medical school fees have been increased during the past year. The average resident fee charged by medical schools in the United States for the session 1941-1942 was $395, whereas in 1941 it was $386 and in 1940, $378.

The report states that the 732 hospitals approved for intern training in February 1942 offered a total of 7,228 internship appointments annually. It explains that "The Council on Medical Education and Hospitals and the Association of American Medical Colleges have

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MEDICAL COLLEGES (Continued)

both recommended that internships should not be reduced below twelve months. The essential character of the intern service has likewise been recognized by the Army, Navy and Selective Service, which have made provisions whereby medical students may be deferred from active military duty until they have completed a year of hospital training. The individual hospitals, however, are confronted with the problem of integrating the one year internship with the accelerated medical curriculum under which a new class graduates every nine months. That intern services are rapidly being modified to coincide with the change in graduation dates is apparent from reports received in July 1942 indicating that 544 hospitals have recently readjusted their appointment schedule. At the same time there has been a reduction in the number of long term assignments, as evidenced by the fact that 711 hospitals are now offering one year internships as compared with 608 last February. Five have scheduled an eighteen months service, 9 a two year internship, and 14 a combination of assignments varying from twelve to twenty-four months. . . ."

The approved hospitals, as of Aug. 15, 1942, now total 739, and the approved internship 8,349. Detailed data regarding these approved hospitals are contained in the report.

"A program of graduate training," the report says, "has recently been formulated by the W. K. Kellogg Foundation whereby twenty-five carefully selected physicians of the Latin-American countries will be brought to the leading ophthalmologic institutions [concerned with instruction regarding the eye and its diseases] of the United States for a minimum of one year's training.

"This program of graduate instruction in ophthalmology will be carried on with the cooperation of the Division of Cultural Relations of the Department of State which has previously made arrangements whereby selected medical graduates of Central and South American countries may secure an opportunity for intern training in approved hospitals in the United States. These opportunities for interns and graduate students are clearly indicative of continued

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progress in Pan American relationships in the field of medical education."

One of the most important aspects of medical education concerns the opportunity for continuation study for practicing physicians. Since 1938 a statistical report of the opportunities available for such study has appeared annually in *The Journal*. The report this year points out that recent developments in state and local programs have included special extension courses in tuberculosis, modern treatment of burns and the prevention and treatment of chemical casualties in modern warfare, obstetrics, the planning of a course in clinical discussion of war neuroses, refresher courses for the general practitioner, home study courses in medicine, surgery, pediatrics and other specialties, public health training, instruction in the Kenny technic for management of acute phases of infantile paralysis, emergencies of civilian and war medicine and surgery, internal medicine and diseases of the chest.

Recent developments in national programs have included courses in diseases of the eye, ear, nose and throat and venereal diseases, as well as courses for medical officers in the Army on active duty that are given repeatedly throughout the year.

Opportunities for continuing professional study for practicing physicians near their home communities held a prominent place in nineteen states. Of thirty-six sponsoring agencies, committees on postgraduate education of state medical societies, independently or with the state departments of health or medical schools, supervised programs in fifteen states. State health departments were active participants in eleven states; extension divisions of six universities, two state tuberculosis associations, a school of public health and a hospital also cooperated in bringing programs to the practitioner.

"In thirty-nine states some form of continuation study for practicing physicians was provided," the report says. "In nine states, namely, Delaware, Idaho, Nevada, New Mexico, South Dakota, Utah, Washington, West Virginia and Wyoming, no courses were reported. However, the state health departments of Arizona, Maine, Nevada, North Dakota, South Dakota, Utah

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and Washington sponsored courses outside the state.

"There were nineteen states that offered continuation study for practicing physicians in or near their home communities. Continuation study in centers where there are ample clinical facilities were offered in thirty-two states and the District of Columbia. There were graduate assemblies in twenty-eight states. The approximate attendance reported at these circuit courses totaled 37,611. . . . The registration for these . . . courses was lower than that reported for the session 1940-1941, when 43,621 individuals attended such courses. . . ."

The report points out that the exigencies of war were chiefly responsible for this decrease in attendance, several of the programs being cancelled.

It is pointed out in the report that "Although the many difficulties in connection with the conduct of continuation and refresher courses during the war are fully appreciated, it is hoped that they will be continued as far as possible. . . . The war will undoubtedly present to the physicians in civilian practice many new and difficult problems. Thus state medical societies and other agencies may be in a position to make a great contribution by dealing with these problems in such continuation and refresher courses as they are in a position to offer."

In that section of the report dealing with the approved examining boards in medical specialties, it is pointed out that "The national emergency will greatly curtail the future training of young men to meet the requirements of the specialty boards, since no provision has been made for military deferment beyond the internship. . . ."

The report explains that a committee appointed by the Advisory Board for Medical Specialties and the Council on Medical Education and Hospitals to deal with this problem has been informed that until the immediate needs of the Army for medical personnel have been satisfied it would be difficult to expect deferment of

(Continued on page 52)

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MEDICAL COLLEGES (Continued)

young men for graduate training. However, later when the Medical Corps of the Army is more adequately filled it is hoped that consideration will be given to the deferring of certain men for graduate training.

Commenting on this aspect of the report, *The Journal* says:

"The graduate programs of thousands of physicians in the United States are necessarily being interrupted by their call to active duty with the armed forces. However, the time spent in the service of their country cannot be considered as time lost in their preparation for future careers in any of the specialties of medicine. Military service will in many instances provide a type of training and experience which, many physicians believe, will be extremely helpful in a satisfactory preparation for the practice of the medical specialties.

"Furthermore, as is indicated elsewhere in this issue of *The Journal,* the various specialty boards have adopted certain policies in regard to granting credit for military service which will compensate at least in part for the interruption of planned programs to meet their requirements for certification. The policies adopted by the specialty boards vary from the granting of an indefinite amount of credit to be determined by an evaluation of the experience of individual applicants to full credit allowed by the American Board of Surgery for work done in the surgical division of a regularly constituted army or naval hospital. The specialty boards are not lowering their standards by the adoption of these policies but are indicating their willingness to give such credit as is justified for experience and training gained with the armed services as well as that secured in civilian hospitals or under other accredited sponsorship. The announcement of these policies, together with the avowed intention of the Council on Medical Education and Hospitals to attempt to formulate plans to provide opportunities for the continued training of recent graduates after the war, should offer considerable encouragement to those in active service who are looking forward to careers in the medical specialties."

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The ILLINOIS Medical Journal

THE N. Y. ACADEMY OF MEDICINE
DEC 21 1942

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December, 1942



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OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

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†Archives of Physical Therapy, 21, 12 (Jan.), 1940.

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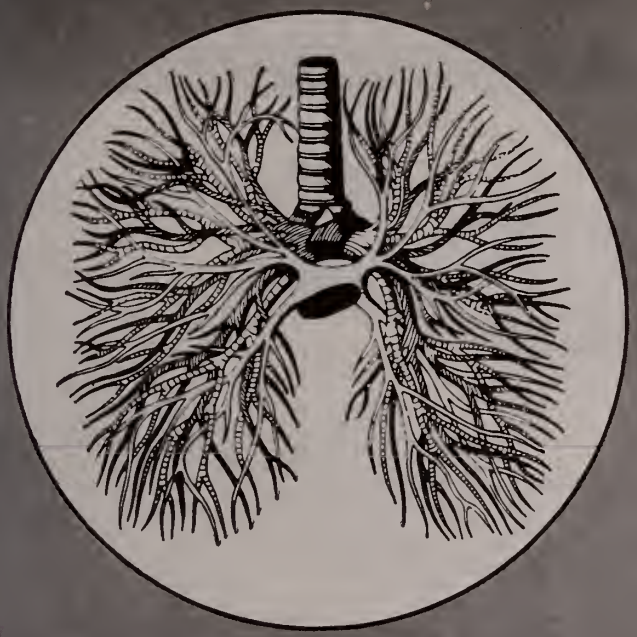
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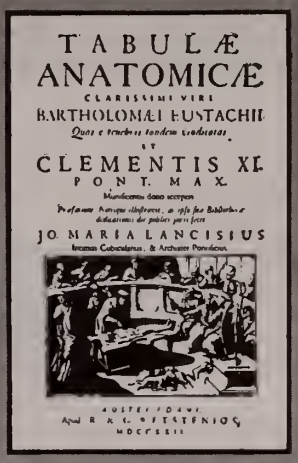
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†Fowler and Barer: "Rate of Hemoglobin Regeneration in Blood Donors." J.A.M.A., 118:421:1942.

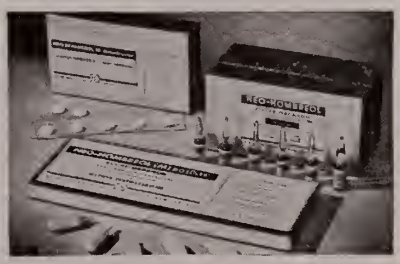
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[1] *Fauley, G. B.; Freeman, S.; Ivy, A. C.; Atkinson, A. J., and Wigod H. S.: Aluminum Phosphate in the Therapy of Peptic Ulcer, Arch. Med.* **67**: *563-578 (March) 1941.*

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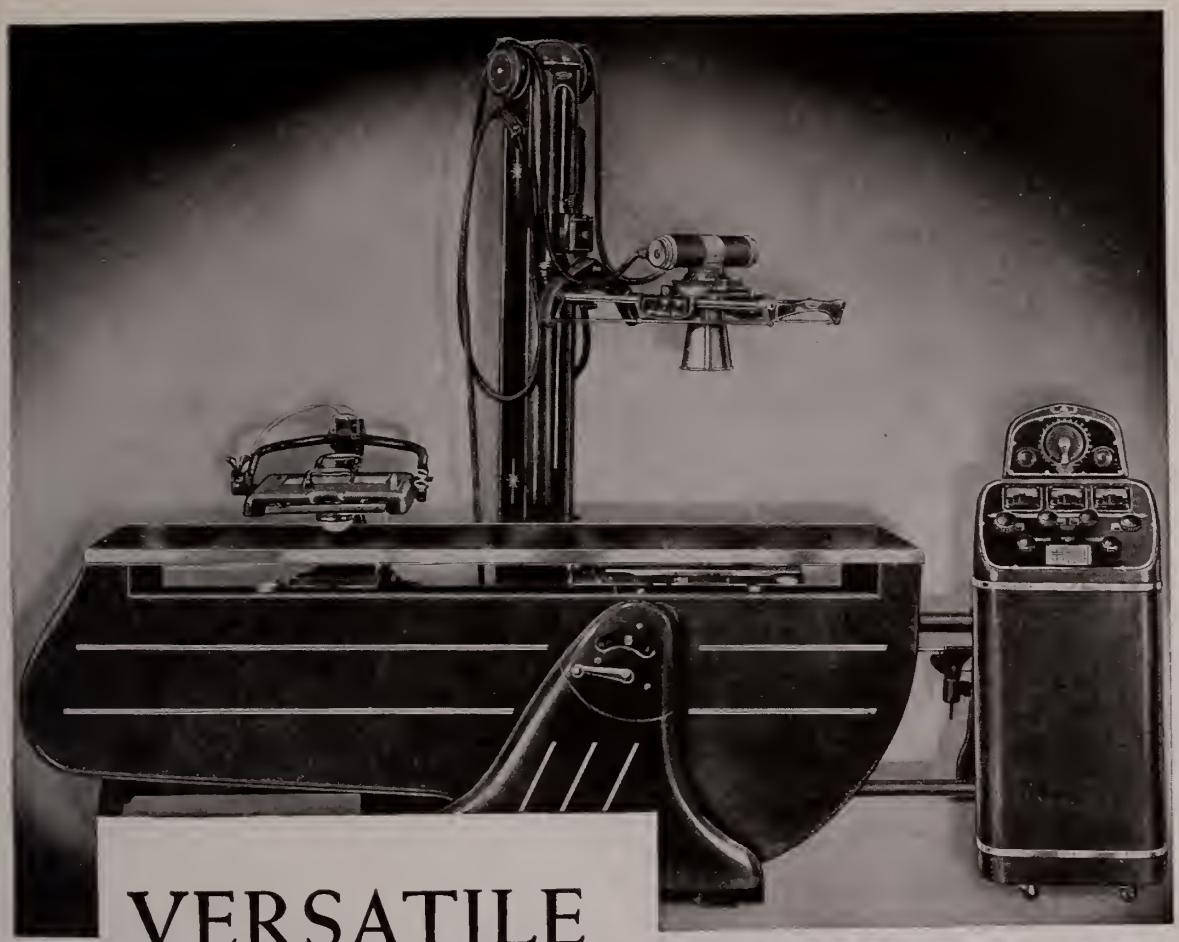
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[1]Lam, C. R.: West Virginia M. J. 38: 215 (June) 1942.

[2]Solandt, D. Y., and Best, C. H.: Lancet 2: 130 (July 16) 1938.

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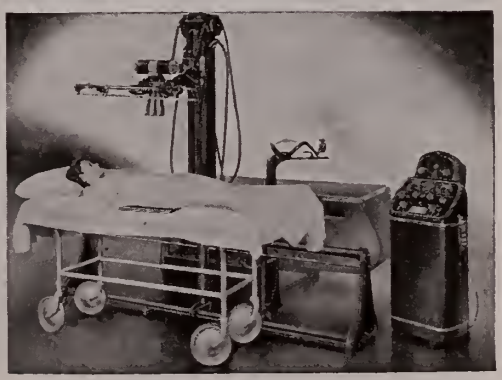
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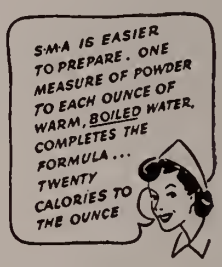
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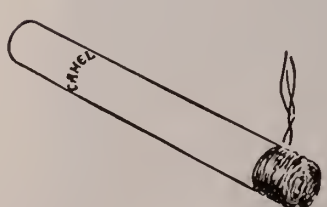
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**J. A. M. A., 93:1110—October 12, 1929*
Brückner, H.—Die Biochemie des Tabaks, 1936
The Military Surgeon, Vol. 89, No. 1, p. 5, July, 1941

"THE CIGARETTE, THE SOLDIER, AND THE PHYSICIAN," The Military Surgeon, July, 1941. Reprint available. Write Camel Cigarettes, Medical Relations Division, 1 Pershing Square, New York City.



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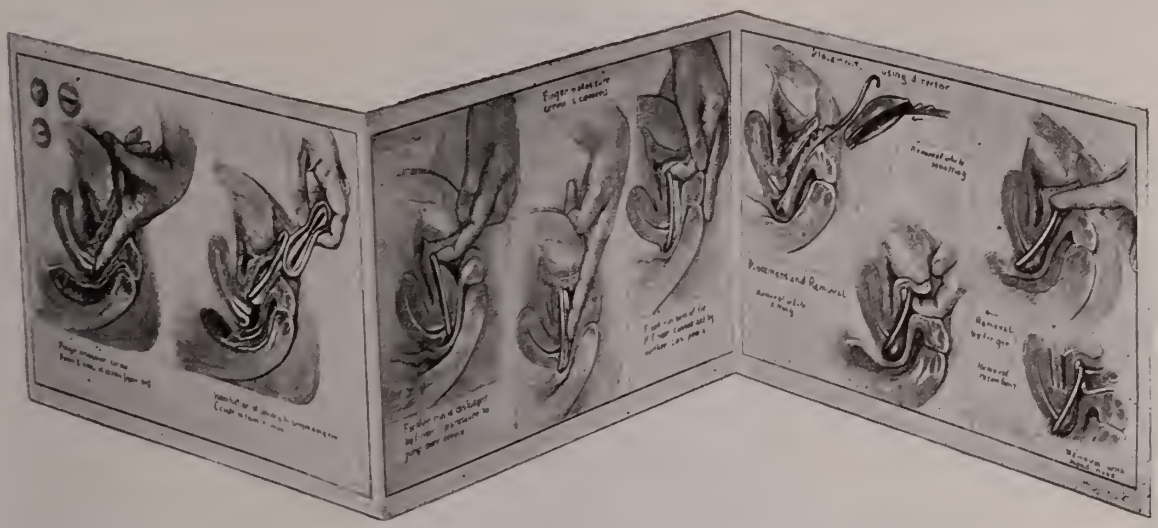
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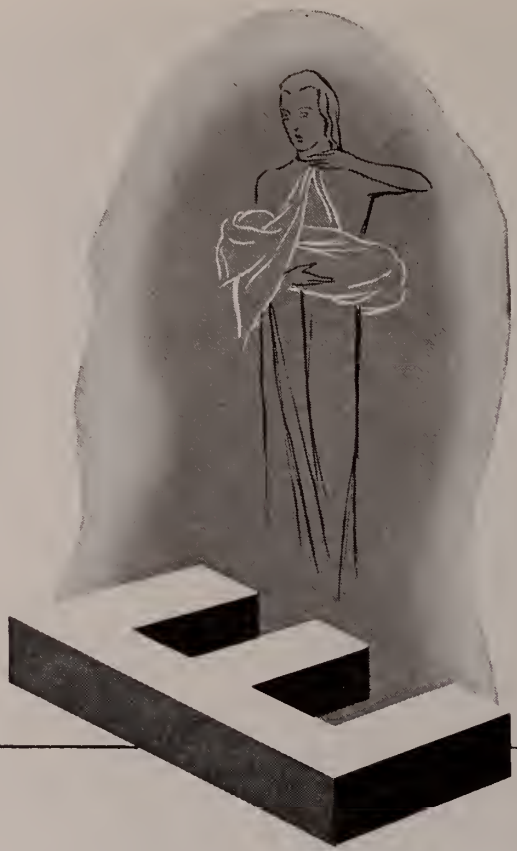
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DECEMBER . . . the star of Bethlehem and the bombs of Pearl Harbor . . . the Prince of Peace and the god of war ☆ Christmas will have little meaning to the thousands of physicians who serve their country and perhaps to thousands more who strive to carry on at home. There is little time for exchange of pleasantries in the grim business of winning a war ☆ But the Christmas Season will come again when the forces of evil are dead—when man again will do unto others as he would have done unto him.

ELI LILLY AND COMPANY

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The Illinois Medical Journal

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Philip H. Kreuscher, Harry Culver.

Editorials

WHAT VITAMINS DO I NEED?

It has long been known that inadequate diet causes disease. Beriberi was described as early as the seventh century; scurvy during the thirteenth century and pellagra nearly two centuries ago. Rickets was known to be caused by an absence of a specific element in the system nearly one hundred years ago and efforts were made even then to supply that which was missing.

No one can deny that there are present certain definite avitaminoses although clinically these cases are seen rarely in the usual daily routine. The real basis for the present knowledge concerning vitamins dates back approximately 35 years. The names of Funk, Hopkins, McCullum and Davis are intimately associated with the earlier developments. To Funk is attributed the selection of the term "vitamines" when he extracted from rice polishings a crystalline substance which experimentally cured beriberi.

A few years later Drummond suggested the dropping of the terminal "e" from the word, "vitamine" as it was found that the "amine" groups were not characteristic of "vitamines". At the present time there are generally considered between 20 and 24 vitamins for which evidence of existence is well established.*

Avitaminoses therefore are deficiency diseases as contrasted with the larger group of infectious diseases. It is stated that although avitaminoses are rarely the cause of death, they may be a contributory factor. It seems quite probable that the important vitamins have now been discovered, and although there may be others unrecognized which are essential to the well-being of man, those causing definite deficiencies are probably included in the present postulated list.

"What vitamins do I need?" is one of the questions frequently asked of physicians these days by many of their patients. Since several of the reliable pharmaceutical houses of this country brought out a number of vitamin preparations a few years ago, it has become increasingly popular for many smaller concerns, many of which have no research facilities in their plants, to put out several or perhaps most of the recognized vitamins which are considered essential to man.

When one listens to his favorite radio program and shops around to get other stations when his favorite is finished, he can almost invariably hear a talk on someone's vitamin preparations, which every man, woman and child should take to insure the proper normal intake of these vital chemical substances. The larger mail order houses sending out catalogues through the length and breadth of the land, invariably has a list of vitamin preparations which can be purchased by anyone. Likewise, in many of the corner groceries, vitamin preparations may be found on the shelves, and someone in the organization will be prepared to tell what type and dosage most people need.

*Eddy and Dalldorf.

It is surprising that with their lack of information on vitamins, and their essential position in the well being of the human family, that our forefathers were able to carry on with the many hardships they had to undergo to settle this country. Yet many of them lived to a ripe old age, even though in their later days they were denied modern dental service and had to literally gum most of the food that went into their systems.

Many people during the past half century have been food faddists, and have denied themselves many of the essential foods, and consequently, their vitaminic content which we know today they need to enjoy the best of health. On the other hand, the average individual who eats a well balanced diet consisting of meat, cooked and raw fruit, as well as fruit juices, vegetables and milk, is rarely troubled with the deficiency diseases caused in toto or in part, by a lack of vitamins.

In recent years carrots cooked or raw have been found on the tables in many homes and are relished by many along with celery or other similar vegetables. These are among the richer sources of vitamin A and it has been possible to determine the average daily requirements of this as well as that of most others among the essential vitamins. Two thousand international units of vitamin A are considered this normal daily requirement, and in addition to carotene as a food rich in vitamin A, the average daily amount can perhaps invariably be found in a daily intake of milk, butter, eggs, and green leafy vegetables.

Codliver oil, as well as the liver oils of a number of other fish including the lowly shark, are rich in vitamin A, as well vitamin D. The source, nature and indications for the other generally recognized essential vitamins are well known to the modern physician, and it is not intended in this short review of the subject to discuss these features.

Recent research investigations have shown that

ILLINOIS STATE MEDICAL SOCIETY

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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

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in foods, perhaps most of these factors are found in the form of provitamins, and they are converted into vitamins in the body through certan chemical processes.

Radio stations are largely maintained through their income from sponsors and perhaps they should not be criticized too severely when many superlative statements are made in connection with the "commercials" which must be a part of each broadcast. Yet, many times misleading statements are made which have a tendency to scare some of the listeners, intentionally or otherwise.

When American people as a whole are educated to the fact that their family physician is the one best qualified to give authoritative information on matters pertaining to health, and give them definite information as to the best diet for their well being and recommend preparations which may be indicated to overcome deficiencies, then only may they properly be fortified against the inroads of disease.

In the proper consideration of vitamins especial efforts should invariably be made to insure an adequate diet, and perhaps an increase in certain food elements or their concentrates which may be lacking, can be well cared for through these changes in diet. A list of essential foods containing the important vitamins and the proper amount of each to be taken can be placed in the hands of all patients by their physician.

When there is a reason for suspecting an insufficiency of any of these essential vitamins, the physician is the proper person to give the necessary advice and make the recommendations for supplying the missing factors. When prescribing reducing diets or special diets for disease it should be seen that an adequate intake of essential vitamins are included in the consideration or otherwise a deficiency may develop.

THE POST GRADUATE CONFERENCES

Owing to the additional responsibilities of the members of the medical profession remaining at home during the war, and also the present tire situation, gasoline rationing and other factors which have never before impaired travel in Illinois, the Post Graduate Committee, with the approval of the Council, decided to hold a few post graduate conferences during the fall and early spring. Subjects of general interest to all physicians were chosen.

The first of the present series was held in Mt. Vernon on October 8th with the following program:

1. Management of Burns — Bryce B. Reeve, M. D., Director of the Medical Department, Standard Oil Company of Indiana, Chicago.
2. Recognition and Treatment of Shock — Arkell M. Vaughn, M. D., Associate Clinical Professor of Surgery, Loyola University Medical School, Chicago.
3. Treatment of Soft Tissue Injuries — Frederick W. Slobe, M. D., Medical Director of Automatic Electric Company and Sinclair Refinery, Chicago.
4. The Minimum Requirement in Treatment of Fractures — J. J. Callahan, M. D., Associate Professor of Surgery, Loyola University Medical School, Chicago.
5. The Oral, Intravenous and Intra-abdominal Use of the Sulfonamides — H. Close Hesseltine, M. D., Assistant Professor of Obstetrics and Gynecology, University of Chicago School of Medicine, Chicago.
6. The Doctor Goes to War — R. F. Olmsted, M. D., Lt. Col., Chief, War Department, Medical Department Officer Recruiting Board, Chicago.

   The Doctor Goes to War — Harold M. Camp, M. D., Chairman for Illinois, Procurement and Assignment Service for Physicians, Monmouth.

* * * *

The second meeting was held in Peoria on October 22nd with the same program as was presented at Mt. Vernon, but with Chester R. Zeiss, M. D., Surgeon for the Carnegie-Illinois Steel Corporation presenting the subject on "Treatment of Burns". Arrie Bamberger, M. D., Associate Professor of Surgery, University of Illinois College of Medicine, Chicago, discussed "Treatment of Soft Tissue Injuries". Italo F. Volini, M. D., Professor of Medicine, Loyola University School of Medicine, Chicago, talked on the "Oral, Intravenous and Intra-abdominal Uses of the Sulfonamides", and Warren H. Cole, M. D., Professor of Surgery, University of Illinois College of Medicine, Chicago, discussed the subject, "Recognition and Treatment of Shock."

Lt. Col. J. L. Deuterman of the U. S. Army Medical Corps, presented a talking film on Gas Poisoning and discussed that subject in a most informative manner. Dr. J. J. Callahan of Chicago appeared on this program also and presented the same subject as at Mt. Vernon.

The local chairmen who presided at these meetings, in their reports to the Post Graduate Committee, were highly pleased with their programs, the interest and the attendance. They stated: "In times like this, I think the program you furnished us could not be excelled, and the speakers were all that one could desire."

"The program was marvelous and every doctor I have contacted has had only the highest praise for all your speakers. You could not have done better in your selection of speakers, and their topics. In behalf of our medical society, I wish to thank you very much for your interest in this matter."

It is the present intention of the Post Graduate Committee to have at least two more of these conferences. It is quite probable that the same, or similar subjects, will be selected as they are subjects of general interest to all physicians at this time when so many are working in the many war industries throughout Illinois, and our doctors are called upon to care for these types of injuries.

THE AMERICAN MEDICAL DIRECTORY

The seventeenth edition of the American Medical Directory was published recently by the American Medical Association. Thousands of physicians throughout the country who have waited many months during its preparation have been highly elated at the contents of this unusual volume. It has been known for months that the task of editing and publishing this large and complete Directory has been especially difficult because of the war and the many additional duties placed upon the A. M. A. personnel.

The A. M. A. Directory is the only complete medical directory published in this country and it gives complete data not only relative to the large number of physicians in the United States and Canada, but also much information of interest to its many subscribers.

There are 180,496 physicians listed in the Directory for the United States, 12,582 for Canada, 5,407 for the U. S. Dependencies, thus making a grand total of 201,272 physicians listed therein. Much information is given relative to the 6,292 hospitals, sanitoriums and related institutions.

Complete information is given relative to the medical schools of the United States and Canada, with a list of all schools which have been in operation in all state and provinces. Lists of Medical Officers of the U. S. Army, U. S. Navy, U. S. Public Health Service, and those in the Veterans Administration are given with information concerning these men.

Each state and province is listed separately with the population of each, the number of physicians licensed, the officers of state and constituent county medical societies, data concerning all approved hospitals within each state, the medical practice act, and the state and county health officers are included by states.

Then follows a complete list of all physicians by city or town of their residence with age of the physician, school from which he graduated, year of license, etc. Membership in state, county or social societies is shown by proper symbols, and Fellowship in the A. M. A. is likewise designated.

A list of all presidents of the American Medical Association from its organization in 1847 is given and it will be of interest to Illinois readers to learn that Illinois physicians have headed the A. M. A. on seven occasions, one of these men acting as president for two consecutive years during the Civil War. The list is as follows:

Nathan S. Davis	1864-1865
Nicholas Senn	1897
Frank Billings	1903
John B. Murphy	1911
Arthur D. Bevan	1918
William Allen Pusey	1924
Malcolm L. Harris	1929

This is really a large book with more than 2,800 pages all filled with information which is of material interest to many physicians throughout the country, to life insurance companies, to industrial and governmental agencies, and to many other groups having occasion to use the reliable information given here on the physicians of the United States and Canada.

The price of the volume is $18.00 and it is published by the American Medical Association, 535 North Dearborn Street, Chicago.

PAPERS FOR THE 1943 ANNUAL MEETING

The Illinois State Medical Society is planning to hold the 1943 annual meeting scheduled for Chicago, on May 18, 19, 20 at the Palmer House. At a recent meeting this matter was thoroughly discussed by the Council, then later by the Committee on Scientific Work and plans are now being made for an outstanding program which it is hoped will be of general interest to all physicians. The 1943 meeting will be considered a war meeting, and efforts will be made to feature the role of medicine in war time and also extend invitations to the many medical officers in the Army and Naval forces stationed in Illinois to attend the meeting and participate in the discussions.

There will be more general sessions scheduled than usual, with all of the scientific sections participating, but provisions will be made for individual sections to conduct their own technical sessions during the meeting.

Members of this Society who desire to present papers before any of the sections are requested to write to the officers of the proper section giving the information, and including the title of the paper, and a short synopsis or abstract so that the officers will be better enabled to determine whether or not the paper will fit in with the program scheme, and also keeping in mind the fact that with so many general sessions, there will be less time than usual available for technical subjects.

SECTION OFFICERS — 1943

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.....4753 Broadway, Chicago, Ill.
C. J. Heiberger, Secretary.....
.....Peoria, Ill.

NOTE: The Section on Pediatrics and the Section on Obstetrics and Gynecology are required to divide the time equally during the meeting, and cannot meet simultaneously unless in joint session.

Physicians interested in presenting papers at the 1943 meeting should write to the above named officers.

* In service.

** A vice-chairman to be appointed.

MEET THE POET LAUREATE

In this number of the Illinois Medical Journal, a new column is made available for some poetic expressions from the "poet laureate" of the Illinois State Medical Society. For many years, Dr. Charles G. Farnum of Peoria, has had a page in the monthly Peoria Medical Bulletin under the heading "P.R.N." Hundreds of physicians throughout Illinois and in neighboring states have been greatly interested in this page and many have asked why the Illinois Medical Journal has not endeavored to get Dr. Farnum to assume responsibility for a similar page, or column each month.

For some little time efforts have been made

to persuade this author-poet to submit some of his interesting "musings" and at long last he has consented to do so. We hope to print each month under his favorite heading "P.R.N.", some bits of verse and nonsense, as Dr. Farnum refers to his hobby.

"I HEAR THAT ....."

One of the most potent weapons which the Nazis introduced to modern warfare, a weapon which hastened the downfall of France, is the deliberate propagation of rumor. It is a weapon against which Americans must steel themselves with unceasing vigilance, for all the tanks, guns and ships in the world cannot bar its entry into our homes.

When the Nazi legions were rolling through the Lowlands, their civilian agents were busy among the people of France spreading rumors coldly calculated to alternately bolster and to undermine the morale of the French. Even before the Germans had entered France, the people heard that their government had fled: that Russia and the United States had declared war on Germany; that Great Britain had surrendered.

The conflict of ensuing rumors served well the aim of the Nazis to confuse and befuddle the French, and what semblance of unity the French possessed soon disappeared.

It is worth noting how at least one Russian guerrilla commander solved this problem in his own unit. Severe punishment was meted out to anyone who said, "I hear that . . . ." or "I understand that . . . ." Unless the man could say "I, myself, saw . . . ." he was to say nothing.

The next time someone tells you that he has it "on good authority" and so forth, just ask him, "Was you there, Charlie?"

MYOMECTOMY DURING PREGNANCY

Fibroid tumors of the uterus usually have no harmful effect on a coexisting pregnancy. However, the patient should be kept under careful observation for complications such as miscarriage or premature labor, obstruction to the descent of the presenting part and degeneration of the fibroid. So-called "red degeneration" of the tumor is the type usually found, and it occurs most frequently during the puerperium, probably because involution disturbs its blood supply. Degeneration may also occur during the prenatal period. Its onset is always marked by pain, occasionally accompanied by fever and leukocytosis. When the degeneration is slight, the symptoms may be relieved by medical treatment, but in the severer types, the tumor should be removed. Interruption of the pregnancy should not result from the operation. On the contrary, myomectomy seems to prevent miscarriage. Corpus-luteum hormone and wheat-germ oil should be administered prophylactically, whether the fibroid is treated conservatively or removed.—R. J. Hefferman, M.D., New Engl. J. Med., 1941. (Clinical Abstract.)

YESTERDAY, TODAY AND TOMORROW

There are two days in every week about which we should not worry — two days which should be kept free from fear and apprehension.

One of these days is yesterday with its mistakes and cares, its aches and pains, it faults and blunders. Yesterday has passed forever beyond our control.

All the money in the world cannot bring back yesterday. We cannot undo a single act we performed; we cannot erase a single word we said. Yesterday is gone.

The other day we should not worry about is tomorrow with its possible adversities, its burdens, its large promise and poor performance. Tomorrow also is beyond our immediate control.

Tomorrow's sun will rise either in splendor or behind a mask of clouds — but it will rise. Until it does, we have no stake in tomorrow, for it is as yet unborn.

That leaves only one day — today. Any man can fight the battles of just one day. It is only when you and I add the burdens of those two awful eternities — yesterday and tomorrow — that we break down.

It is not the experience of today that drives men mad — it is remorse or bitterness for something which happened yesterday and the dread of what tomorrow may bring. Let us, therefore, journey but one day at a time.—L. H. P., Penn. Med. Jour.

★ BUY WAR BONDS ★

Correspondence

COURSE IN OCCUPATIONAL DERMATOSES

A combined lecture and demonstration course in occupational dermatoses will be conducted in Chicago, beginning January 11, 1943, by Dr. Louis Schwartz, Chief of the Dermatoses Investigations Section of the U. S. Public Health Service of Bethesda, Maryland. The teaching period will cover two weeks, the first of which will be devoted to lectures and demonstration, and the second to plant visits. Dermatologists, industrial physicians and others interested in the course should communicate with

Dr. Edward A. Oliver
55 East Washington Street
Chicago, Illinois

No limit will be placed upon enrollment for the lectures but the visits to the plants will be limited to twenty-four enrollees. No fees will be charged.

SOCIAL HYGIENE DAY

Social Hygiene Day will take its battle stations throughout the country as in former years, despite the gasoline and rubber restrictions which are in force this year. Doctor Walter Clarke, Executive Director of the American Social Hygiene Association, in announcing the annual observance scheduled for Wednesday, February 3, 1943, said that this battle on the home front against venereal disease is nation-wide and does not depend upon transportation to rally its fighting forces. Community meetings will take place throughout the land, sponsored by local clubs, church groups, and social and health agencies.

Last year, when tires and gas were not restricted, Social Hygiene Day was observed by thousands of public meetings held in communities all over the United States, Doctor Clarke explained. He intimated that this number promises to be greatly increased in 1943, for the large meetings, serving metropolitan areas, will be supplemented by an even greater number of local meetings.

Doctor Clarke pointed out that in wartime more than ever the United States must man its battle stations in every city, town and hamlet in order to stamp out the venereal diseases at their source. Syphilis and gonorrhea are enemies which threaten us at home. They disable our men at the front, but their roots are on the home front. For this reason Social Hygiene Day this year will assume a greater significance than ever before. It will be observed in every community, no matter how small it may be, by discussion of direct action designed to stamp out the two diseases which are as menacing to our armed forces as the bombs of our enemies.

"During the first world war, there were 157,146 more new cases of syphilis and gonorrhea among United States soldiers, sailors and marines," Doctor Clarke explained, "than there were wounds in battles. Total absences from duty due to this infection kept the equivalent of 20,600 men out of the fighting for a whole year, men trained for their country's service, men upon whom their country counted for its defense.

"In terms of today's hard held fronts such a loss would mean the equivalent of the personnel

required to man five huge aircraft carriers and nine destroyers. No axis enemy could be more destructive than this enemy whom we must defeat on health battle fronts within our own country. We do not need to suffer this loss and do not need gas and tires to meet that enemy and to destroy him. We have the scientific weapons to prevent the spread of the venereal diseases. In war time the principal function of social hygiene organizations everywhere is to persuade every community to use these weapons effetively. Intelligent cooperation among the health and welfare agencies in every city and town will help stamp out venereal disease and thus help our armed forces to bring us victory on the battle fronts."

UROLOGY AWARD

The American Urological Association offers an annual award 'not to exceed $500' for an essay (or essays) on the result of some specific clinical or laboratory research in Urology. The amount of the prize is based on the merits of the work presented, and if the Committee on Scientific Research deem none of the offerings worthy, no award will be made. Competitors shall be limited to residents in urology in recognized hospitals and to urologists who have been in such specific practice for not more than five years.

The selected essay (or essays) will appear on the program of the forthcoming meeting of the American Urological Association, May 31 — June 3, 1943, Hotel Jefferson, St. Louis, Missouri.

Essays must be in the hands of the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis, Tennessee, on or before March 1, 1943.

WOMAN'S AUXILIARY PRESS AND PUBLICITY

Do you read the letters from your president and chairmen in our Illinois State Journal — and do you enjoy the little articles telling what is being done by the different county-auxiliaries? Of course you do! Well then — don't you think the other auxiliaries would like to hear what you are doing? Of course they would!

This year, publicity is more important than ever. With the gas rationing and other restrictions (which I am sure we are all accepting in good spirit) we can't get around and visit our auxiliary friends so a nice newsy article will help keep us in touch with each other.

To make it plainer — I'm asking publicity chairmen of all auxiliaries to try to send write-ups of their meetings to their local papers and medical bulletins and then to send the printed copies to me for our Scrap Book. All of our Auxiliaries should be represented in our Archives. I'LL BE LOOKING FOR THAT NOTICE!

Cordially yours,
(Mrs. J. E.) Lucile McGuiggan
State Publicity Chairman.

THE WOMAN'S AUXILIARY
to the Illinois State Medical Society
Program 1942-1943
Mrs. Alfred F. Gareiss
Chairman

Aims

First: To assist the Illinois State Medical Society in the advancement of the prevention of disease.

Second: To aid in securing better legislation indicated in the pursuance of these ends.

Third: To do such supplemental work as shall be determined from time time by the Medical Society in the advancement of professional interests.

Fourth: To increase the Benevolence Fund by the allocation of $1.00 a year per member, and by gratuities and endowments through the efforts of the Woman's Auxiliary to the Illinois State Medical Society.

Resolution

House of Delegates
Springfield, June, 1942.

Be it resolved, that the Woman's Auxiliary be requested to cooperate with officers of their respective county societies in the preparation of such a local county society history.

Program

War Work

1. Sale of Stamps and Bonds
2. Nutrition Courses
3. First Aid Courses
4. Blood Donation

5. Red Cross

HEALTH EDUCATION

through the promotion of "Hygeia," the health magazine.

LEGISLATION

Study Federal, State and Local medical health legislation.

BOOK REVIEWS

Books selected from a recommended list.

PUBLIC RELATION DAY

Speakers to be approved by the Educational Committee.

1. Cancer Control
2. Nutrition
3. Vivisection
4. Infantile Paralysis
5. Pneumonia
6. Maternal Welfare
7. Heart
8. Obesity
9. Tuberculosis

SOURCE OF MATERIAL

Handbook of State Auxiliaries
Constitution and By-Laws
Bulletin of the Woman's Auxiliary to the American Medical Assn.
Educational Committee of the Illinois State Medical Society
Illinois State Medical Journal
Journal of the American Medical Association
Hygeia — the health Magazine
State Board of Health
Illinois Health Messenger
Bureau of Home Economics, Department of Agriculture, Washington, D. C.

APPROVED MATERIAL AND SPEAKERS

May be obtained from Miss Jean McArthur, Illinois State Medical Society, Educational Committee, 30 North Michigan Avenue, Chicago, Illinois.

ENTERTAINED AT TEA

The Woman's Auxiliary to the Chicago Medical Society was entertained at a Tea, October 22nd, by the American Medical Association. A Motion picture "DOCTORS AT WORK" was shown with Dr. W. W. Bauer acting as narrator. There was also a conducted tour of the Laboratories, Libraries, Offices, Exhibits, Printing Presses and Bureau of Investigation.

An extensive program has been carried on by the Defense Chairman Mrs. Harry J. Dooley and her committee. The booth at 30 N. Michigan Ave. has been manned daily from 10:00 A. M. until 4:00 P. M. by Auxiliary members. One hundred and sixty-four women have served in this capacity. Up to October first over $25,000 worth of Bonds and Stamps had been sold since February.

The Hygeia department has been busy renewing and securing subscriptions.

Mrs. Charles W. Stigman
Press & Publicity
Chairman, Cook County

LAUNCH EDUCATIONAL PROGRAM

An intensive educational program on rheumatic fever and heart disease has been launched by the Metropolitan Life Insurance Company with the cooperation and advice of the American Heart Association, the Academy of Pediatrics, and the Crippled Children's Division of the United States Children's Bureau. Beginning this fall, the program will be extended through the first half of 1943.

The purpose of this activity is twofold. Through popular literature, addresses, radio programs, news releases, and advertisements an effort will be made to acquaint the general public with the newer knowledge of rheumatic fever and rheumatic heart disease. This phase of the program will stress the importance of early diagnosis, proper care for rheumatic fever victims, and the declining mortality rate among children in the younger age groups. The Metropolitan is using the services of its Field Staff in this activity. Through its representatives, who operate in some three thousand communities, the Company expects to reach over a million homes with information on rheumatic fever.

An equally important objective of this program will be to distribute to the medical profession up-to-date literature covering various aspects of the rheumatic fever problem. Included among the printed materials for physicians is a clinical booklet which sets forth in concise form the modern concept of the disease, criteria for its early diagnosis and treatment, methods of managing the disease and recognizing its cardiac involvements. This booklet is being developed in collaboration with special committees of the American Heart Association and the Academy of

Pediatrics. The membership of these committees include: Drs. T. Duckett Jones, Arthur C. DeGraff, Ann G. Kuttner, Edward F. Bland, Ethel C. Dunham, O. F. Hedley, Hugh McCulloch, Homer Swift, Stanley Gibson, and A. T. Martin.

This program marks the first time that a national educational campaign has been undertaken to reach the general public and the medical profession with rheumatic fever literature, especially prepared according to the needs and interests of each group.

HAZARDS OF THE MEDICINE CHEST IN BLACKOUTS ARE POINTED OUT

Physcian Warns Against Dangerous Drugs In Poorly Marked Or Mislabeled Bottles That Are Too Easily Accessible

A blackout resulting from defense activities or normal electrical failure may bring needless loss of life if dangerous drugs in poorly marked or mislabeled bottles are too easily accessible, Austin E. Smith, M.D., Chicago, warns in *Hygeia, The Health Magazine* for November. "If the medicine chest is one of those places that has been ignored until you 'have more time,' is not the present moment appropriate for a careful survey of the potential dangers?" he asks. "Perhaps your community may have practice blackouts before you have more time, unless you deliberately create that time.

"A systematic consideration of the pertinent points associated with the home medicine cabinet may easily obviate any attendant dangers. The cabinet should be out of reach of young children. Too often they find that they can easily reach their goal by climbing on the bathtub or washbasin. If the cabinet cannot be kept out of the reach of children it should be fastened securely by a lock, and the key to that lock should be kept out of the reach of children but in a nearby and readily accessible place—such as a hook on the top of the chest, beside the linen closet or behind the bathroom door. If no cabinet is provided in the bathroom, drugs and first aid agents may be kept elsewhere but, above all, they should not be kept in the pantry along with articles of food.

"All bottles should be labeled so that there can be no mistaking the contents or the purposes for which they are intended. If possible, the labeling should permit accidental wetting without defacement of its statements. Any drug of a dangerous character should be kept on the highest shelf and not mixed with ordinary medicinal agents. . . ."

Dr. Smith says that the contents of the medicine cabinet can be divided into two classes: agents which are the result of prescriptions for specific diseases, and agents which are to serve as first aid remedies and as palliative measures for minor complaints which may not require medical attention. He says that the contents should not include patent medicines for self medication of diseases that can be treated successfully only under the guidance of a physician.

"If poisons must be kept, they should not be in the regular medicine chest, but in a separate locked cupboard, and in containers which attract attention to their contents while being opened," Dr. Smith advises. "Boxes or bottles containing poisons should have their covers or corks fastened with adhesive tape, or pins stuck through the cork, to make the user stop and consider before using. If, in spite of all precautions, or because of the absence of precautions, poisons are taken, the following suggestions may help while the arrival of the doctor is awaited:

"Call the doctor at once when poison is suspected. Find out if possible what the patient has taken, so that the doctor may have some warning as to what to bring with him. At least give the doctor a brief and calm description of how the patient acts. . . ."

A teacher in a country school was trying to impress on the minds of the small evacuees the meaning of ARP. He asked the children to give their ideas of a perfect blackout.

Next day the answers were brought and the prize was awarded for this:

"A blind black man, dressed in a black suit, in a coal cellar with the doors shut, on a foggy night, and without a light, groping among the coals for a blind black cat."

—*Saturday Night,* Ireland.

Medical Economics

Edited by R. K. Packard, M.D., Chairman of the Committee on Medical Economics of the Illinois State Medical Society, 826 East 61st Street, Chicago, Illinois.

Trends in our political, social and economic life change rapidly. At times we are astounded by these swift trends in both thinking and action. Just as we are about to lose hope in democracy something happens suddenly, and almost dramatically, and it has always been this way.

The Hoover administration, ushered in during a great wave of prosperity, suddenly found itself facing a great depression. America had been on what might be called a great financial spree, during a great industrial trend, and this spree, as most sprees do, ended up with some kind of a headache. Some economists and most Republicans, including Mr. Hoover himself, maintained, and still maintain, that the depression was the result of the world war and post world war economic conditions. The Democrats and most economists, on the other hand, laid the trouble squarely in the lap of the Republican party and management. The facts are that the depression started about eleven years after the war, and it followed an unprecedented period of prosperity in which the national past time was one of gambling. It must be remembered that during this trend the Republican slogan was "Don't Sell America Short." During this period management declared many extra cash dividends, and stock dividends. Real Estate, both city and farm, gyrated with little consideration of actual value. Paper wealth was great; the ticker was behind, because of the rapid rise of the market with increased cash and stock dividends. Transfer corners in metropolitan areas rose from fifty thousand to five hundred thousand to a million dollars in two or three years. Subdivisions were real blitzes; they were really mobile. Most bankers were caught in the mesh; they were not seasoned generals in fighting this new blitz, and they surrendered their cash for gyrated paper. Credit from every source was extended. Suddenly and dramatically the trend changed, and the bubble burst economically, socially and politically. The market flopped faster than it had gyrated, and real estate flopped with equal rapidity. Sales stopped; unemployment increased rapidly, and soon the banks were closed. Mr. Hoover now faced a new blitze — the blitze of sudden depression, of sudden political, economic and social uneasiness. The headache was in nearly every home. At this time the great majority of the American people had confidence in Mr. Hoover. He had been elevated to the presidency as a superman, a self-made man wealthy through the efforts of rugged individualism and free opportunity. He was a man of long experience in world affairs, and as Secretary of Commerce had been on the inside of our own problems and world problems.

The people looked for a prescription for their headaches. Apparently Mr. Hoover did not see the incipient symptoms of this economic disease. He only recognized it when definite evidence of shock was present, and he did not quite fully recognize it then. The patient had to reach the state of complete shock and collapse before he actually recognized it. Mr. Hoover, caught in a dire emergency, had no prescription for this shock. He thought it could be treated by palliative measures, and by telling the family not to worry the patient would be better tomorrow. He appealed to management not to lay off employees, but management was losing its blood,

that is, its sales. Management was not prepared for this epidemic of shock. It had no blood banks for employees. Unemployment produces more unemployment, just as hemorrhage produces greater shock. The capitalistic system, consisting of management, began taking trains to Washington for blood. Some of them received it. They might be called the private room patients, such as big business men and big banks, but the small banks, the small business men, and the farmers, actually the ward patients, were, to a large degree, left untreated. They were not transfused. Their transfusion was largely in the words that "prosperity is just around the corner." The trend continued and there was little or no improvement. Perhaps the patients were impatient and did not wait long enough for the therapeutics to act. The people demanded a new doctor. They did not care much who he was, or where he was from, but just a new doctor to cure the political, social and economic diseases.

It is generally recognized that in the 1932 election the people voted against Mr. Hoover more than for Mr. Roosevelt. In the '36 and '40 campaigns the people voted for Mr. Roosevelt. Why? In 1932 they had lost confidence in Mr. Hoover, and the Republican party and management. In 1936 and up to 1940 they had gained confidence in the new doctor. They were recovering from their 1929 sickness. They had been told that the former doctor had not only been unable to diagnosis their trouble, but unable to treat it. The slogan of "the forgotten man" emerged and found sympathetic ears among the millions. New transfusions were instituted in addition to carrying on the transfusions initiated by the preceding administration. Alphabetical transfusions were set up with great rapidity, and they were called the New Deal. These new transfusions were for the ward patients, farmers, labor and small business men. The theme of this definite new trend was centralization of government, socialization of the masses, division of wealth, destruction of rugged individualism, and an entirely regimented America. The public took large doses of this new prescription. They thought it constituted a free clinic. Soon the government was on a great spending spree itself. The public debt apparently meant very little. Labor and the farmer were coddled sit-down strikes developed, management was put on a block, and a new blitz was on. To some extent class and racial hatred were engendered. The Supreme Court had little place. Congress took orders like a child who was not particularly obedient but scared to death.

Now war had developed in the old world. China and Japan had been at war for sometime, sympathies were with the Chinese, but our scrap was going to Japan. Finally our sympathies were with the Allies, and there was a definite trend to assist them. A controversy arose between so-called interventionists and the isolationists. A great many people wanted to be interventionists as far as money and material were concerned, but isolationists as far as soldiers going to fight on foreign soil.

In the campaign of 1940 Mr. Roosevelt repeatedly promised the American fathers and mothers that their sons would not be sent to foreign soils. The rest of the course is history, and space does not allow time for complete discussion. Suffice to say that our administration did keep a chip on its shoulder, and we finally found ourselves in war. After Pearl Harbor was attacked, there was suddenly just one America — an all out America to win the war. By this time we had a huge national debt and little to show for it. The war of necessity was going to add billions to the national debt and a new source of revenue had to be found. The new source of revenue had to come from the low income group. War of necessity changed both the coddling of labor and of farmers. The Pearl Harbor incident, with our Admirals and Generals asleep at the switch, did not help the situation. The building up of many bureaus through which important matters could not be quickly and satisfactorily handled, added to the confusion. Finally the plea to purge the isolationists in the country, while fighting for democracy, found a new note and then a new trend was born. The confusion continues to grow, the draft regulation changed rapidly, labor and agriculture were in a conflict, and an election took place.

Now just at this time many people had again made up their minds that democracy had failed. We had been pretty much socialized. We had a huge national debt. We had 2,600,000 people on the federal payroll. Things looked some-

what hopeless, and a new election was the new blitz. The people wanted to change doctors again. They began to care more about their own freedom, liberty and rights than they did about assuming the responsibility for the entire world. We found many people asking themselves "what are we fighting for?" The usual answer was "our liberty" — the question arises "what is our liberty?"

The following is a Quotation from John Stuart Mills' "Essay on Liberty" written in about 1860.

"Little, however, as people are accustomed to a doctrine like that of Von Humboldt, and surprising as it may be to them to find so high a value attached to individuality, the question, one must nevertheless think, can only be one of degree. No one's idea of excellence in conduct is that people should do absolutely nothing but copy one another. No one would assert that people ought not to put into their mode of life, and into the conduct of their concerns, any impress whatever of their own judgment, or of their own individual character. On the other hand, it would be absurd to pretend that people ought to live as if nothing whatever had been known in the world before they came into it; as if experience had as yet done nothing towards showing that one mode of existence, or of conduct, is preferable to another. Nobody denies that people should be so taught and trained in youth, as to know and benefit by the ascertained results of human experience. But it is the privilege and proper condition of a human being, arrived at the maturity of his faculties, to use and interpret experience in his own way. It is for him to find out what part of recorded experience is properly applicable to his own circumstances and character. The traditions and customs of other people are, to a certain extent, evidence of what their experience has taught them: presumptive evidence, and as such, have a claim to this deference: but, in the first place, their experience may be too narrow; or they may not have interpreted it rightly. Secondly, their interpretation of experience may be correct but unsuitable to him. Customs are made for customary circumstances, and customary characters; and his circumstances or his character may be uncustomary. Thirdly, though the customs be both good as customs, and suitable to him, yet to conform to custom, merely as custom, does not educate or develop in him any of the qualities which are the distinctive endowment of a human being. The human faculties of perception, judgment, discriminative feeling, mental activity, and even moral preference, are exercised only in making a choice. He who does anything because it is the custom, makes no choice. He gains no practice either in discerning or in desiring what is best. The mental and moral, like the muscular powers, are improved only by being used. The faculties are called into no exercise by doing a thing merely because others do it, no more than by believing a thing only because others believe it. If the grounds of an opinion are not conclusive to the person's own reason, his reason cannot be strengthened, but is likely to be weakened by his adopting it; and if the inducement to an act are not such as are consentaneous to his own feelings and character (where affection, or the rights of others are not concerned), it is so much done towards rendering his feelings and character inert and torpid, instead of active and energetic.

He who lets the world, or his own portion of it, choose his plan of life for him, has no need of any other faculty than the ape-like one of imitation. He who chooses his plan for himself, employs all his faculties. He must use observation to see, reasoning and judgment to foresee, activity to gather materials for decision, discrimination to decide, and when has decided, firmness and self-control to hold to his deliberate decision. And these qualities he requires and exercises exactly in proportion as the part of his conduct which he determines according to his own judgment and feelings is a large one. It is possible that he might be guided in some good path, and kept out of harm's way, without any of these things. But what will be his comparative worth as a human being? It really is of importance not only what men do, but also what manner of men they are that do it. Among the works of man, which human life is rightly employed in perfecting and beautifying, the first in importance surely is man himself. Supposing it were possible to get houses built, corn grown, battles fought, causes tried, and even churches erected and prayers said, by machinery — by automatons in human form — it would be a considerable loss to exchange for these auto-

matons even the men and women who at present inhabit the more civilized parts of the world, and who assuredly are but starved specimens of what nature can and will produce. Human nature is not a machine to be built after a model, and set to do exactly the work prescribed for it, but a tree, which requires to grow and develop itself on all sides, according to the tendency of the inward forces which make it a living thing.

It will probably be conceded that it is desirable people should exercise their understandings, and that an intelligent following of custom, or even occasionally an intelligent deviation from custom, is better than a blind and simply mechanical adhesion to it. To a certain extent it is admitted, that our understanding should be our own: but there is not the same willingness to admit that our desires and impulses should be our own likewise; or that to possess impulses of our own and of any strength, is anything but a peril and a snare. Yet desires and impulses are as much a part of a perfect human being, as beliefs and restraints: and strong impulses are only perilous when not properly balanced; when one set of aims and inclinations is developed into strength, while others, which ought to coexist with them, remain weak and inactive. It is not because men's desires are strong that they act ill; it is because their consciences are weak. There is no natural connection between strong impulses and a weak conscience. The natural connection is the other way. To say that one person's desires and feelings are stronger and more various than those of another, is merely to say that he has more of the raw material of human nature, and is therefore capable, perhaps of more evil, but certainly of more good. Strong impulses are but another name for energy. Energy may be turned to bad uses; but more good may always be made of an energetic nature, than of an indolent and impassive one. Those who have most natural feeling, are always those whose cultivated feelings may be made the strongest. The same strong susceptibilities which make the personal impulses vivid and powerful, are also the source from whence are generated the most passionate love of virtue, and the sternest self-control. It is through the cultivation of these, that society both does its duty and protects its interests; not by rejecting the stuff of which heroes are made, because it knows not how to make them. A person whose desires and impulses are his own — are the expression of his own nature, as it has been developed and modified by his own culture — is said to have a character. One whose desires and impulses are not his own, has no character, no more than a steam-engine has a character. If, in addition to being his own, his impulses are strong, and are under the government of a strong will, he has an energetic character. Whoever thinks that individuality of desires and impulses should not be encouraged to unfold itself, must maintain that society has no need of strong natures — is not the better for containing many persons who have much character — and that a high general average of energy is not desirable.

In some early states of society, these forces might be, and were, too much ahead of the power which society then possessed of disciplining and controlling them. There has been a time when the element of spontaneity and individuality was in excess, and the social principle had a hard struggle with it. The difficulty then was, to induce men of strong bodies or minds to pay obedience to any rules which required them to control their impulses. To overcome this difficulty, law and discipline, like the Popes struggling against the Emperors, asserted a power over the whole man, claiming to control all his life in order to control his character — which society had not found any other sufficient means of binding. But society has now fairly got the better of individuality; and the danger which threatens human is not the excess, but the deficiency, of personal impulses and preferences.

Persons of genius, it is true, are, and are always likely to be, a small minority; but in order to have them, it is necessary to preserve the soil in which they grow. Genius can only breathe freely in an atmosphere of freedom."

During these recent trends there have been many who favored some form of socialized medicine. So strong was the trend for socialized medicine that many thought it was inevitable, and some reached the conclusion that any attempt to change this trend was a waste of time and effort. It has also been thought by some, that men in the medical profession were fearful of making opposition because it in some way might effect them if socialized medicine did come to pass. Fortunately American medicine had

many leaders who did not subscribe to this idea and kept putting forth vigorous efforts to combat socialized medicine. The National Physicians Committee was organized to carry on a campaign of public education along this line. In the last Congressional election the National Physicians Committee through the cooperation of individual physicians, committees of physicians, and other professional men, contacted in person or by letter, with explanatory literature, more than eight hundred candidates and three hundred and ninety congressional candidates. It is now estimated that more than three hundred congressional candidates elected on November 3, 1942, publicly and unqualifiedly pledged themselves, through "STATEMENTS OF OPINION," to preserve the independence of the medical profession and our system of distributing medical care. Perhaps the election is evidence of a definite trend in a new direction at the present time. Our present immediate job is to win the war, and many believe that as a result of the election our war efforts will be improved.

R. K. Packard, M.D.
Chairman,
Committee on Medical Economics.

MEDICAL JOURNEY INTO CHINA

The next stage in the journey was made, owing to the difficulty of obtaining petrol increasing the further you go into inland China, in a charcoal burning truck. The fuel used is locally made charcoal broken up small. A small furnace below in front of the driver's cab burns this, and generates an inflammable gas which is passed through an elaborate series of filters situated under the chassis of the truck, and is then mixed with air and fed into the engine instead of petrol vapour. The cost of this fuel is negligible compared with petrol, so the method has possibilities. We soon discovered that driving one of these trucks was not all easy going. There are so many controls, and starting the engine is so complicated, that the driver needs a trained man to assist him. Then the top speed attainable on this particular model (about the best yet produced) is only 20 m. p. h. Then there are six gears, and on anything like a steep hill bottom gear is absolutely necessary, but alas, changing down into bottom without stopping and much coaxing is almost impossible. Another thing that adds interest to the run is that charcoal is bought in large sticks, and the furnace is very fussy about its food. One fragment exceeding a certain small size is quite likely to choke its fueling mechanism, and produce the most disastrous consequences. So all charcoal has to be broken up and sorted by hand. Twice a day driver and passengers fall to with hammers and smash the sticks of charcoal up into little pieces. This is generally done on the ground in the main street of a village, and provides a high form of entertainment for the local inhabitants, who make a tight ring of spectators about 12 deep all around us. One night we were going on late to make up for some lost time, and about 10 P. M., just as we thought we were reaching our destination, we learned to our dismay that the charcoal was running out. It looked as though we should either have to stop where we were all night — we were at the top of a mountain pass — or else break up charcoal and reload. A Chinese passenger was very nervous about bandits, and said that stopping there would be most unwise; so we got out, and in spite of a very unpleasant drizzle made the best of a bad job and reloaded our furnace. This wasn't much fun for anybody, and we were all heartily glad when we did get to bed that night. —*The Lancet, June* 27, 1942.

Italia Germania Vittoria is the name of the twenty-second child recently born to an Italian woman aged 46, who thus became the woman with the most children in Italy, according to the Berlin correspondent of the *Svenska Dagbladet* of August 1. According to the *Nieuwe Rotterdamsche Courant* of May 18, at the "Deutsche Haus" at Rotterdam, 44 mothers of large families were present at the celebration of the German mothers' day, organized by the South Holland kring of the NSDAP. The meeting was attended by representatives of the state, army and party. Oberdienstleiter Schmidt presented military crosses to the mothers.

J.A.M.A.

★ BUY WAR BONDS ★

Medicine's Role in the War Effort

MEDICAL EDUCATION AND THE WAR

The following statement from the directing board of the Procurement and Assignment Service, Washington, D. C., has just been sent to the deans of medical schools.

MEDICAL SCHOOLS

Recent information indicates that a relatively large percentage of medical students have failed to join the reserve services of the Army or the Navy. It is urged that every student who has not yet done so should apply immediately for a commission in the Army or the Navy. This will enable medical students to continue their training through one year of internship before they are subject to Selective Service.

INTERNES

Army. — Interns may not enlist in the Medical Administrative Corps Reserve, since this group was organized solely for the purpose of enabling the medical students to complete their training. If a student is not a member of the Medical Administrative Corps, he is subject to the jurisdiction of the Selective Service System and may be inducted before he can complete the one year of internship which is required for commission as first lieutenant in the Medical Corps of the Army of the United States. Interns, whether or not they have been in the Medical Administrative Corps Reserve during their attendance at medical school, cannot apply for a commission in the Army Medical Corps until sixty days before the completion of their internships.

Navy. — The Navy will commission interns as lieutenants, junior grade, if they meet the requirements, and it will allow them to complete their internships. We recommend, therefore, that students who contemplate service in the Navy should apply for commissions as ensigns HV (P) in the Navy while they are in medical school.

FACULTIES

It is recommended that deans request faculty members who plan to apply for a commission to discuss the matter with school authorities before making formal application. A physician who is deemed essential on the faculty of a medical school should not apply for a commission until he has been cleared by the school and by the Procurement and Assignment Service and until arrangements have been made for his replacement.

No physician under 45 years of age, who is physically fit for military service, should be declared essential to a medical school faculty unless he devotes at least 25 per cent of his time throughout the entire year to medical school teaching, clinical as well as formal. Any exception to this policy must be justified by unusual circumstances.

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ALIEN PHYSICIANS

The following statement by the directing board of the Procurement and Assignment Service has just been sent to state chairmen for physicians:

The Army and the Navy are not in a position to accept enemy alien physicians as commissioned officers because of the citizenship law. Also many of these physicians do not meet other re-

quirements such as license to practice, internship or other professional qualifications. It therefore seems inadvisable to recommend that these aliens go into the Army as privates with the expectation of receiving citizenship at the end of three months, for many may not receive it for some reason, and they may not be acceptable to the Medical Corps even though they are given citizenship. Since there are many places in which these men can be of service in civilian life, it is recommended that efforts be made to place those who are not acceptable for service with the Army or the Navy as temporary employees in hospital positions, in critical areas where more physicians are needed, in special positions in medical schools, and in public health agencies and so on. In such positions they may be rated as essential and may thus be used in their professional capacity. Until definite rulings are made concerning the admission of this group into the military services, these general policies should be followed.

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SHORTEN COURSE FOR ARMY DIETITIANS

The War Department announced in November that more than two hundred dietitians will be trained each year for service at army hospitals at home and abroad The course of training will comprise a six month pretraining course at civilian hospitals and a six month course at army hospitals. The first group of dietitians was expected to proceed to army hospitals on December 1.

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CIVILIAN DEFENSE APPOINTMENT

Dr. Mark V. Ziegler, Chicago, recently resigned as director of district number 3 of the U. S. Public Health Service to become regional medical director of the Office of Civilian Defense in Baltimore.

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DR. IVY TO DIRECT NAVY RESEARCH INSTITUTE

The new Naval Medical Research Institute at Bethesda, Md., was placed in commission on October 27. Among those attending the ceremonies were Rear Adm. Ross T. McIntire, surgeon general of the navy, and Rear Adm. Harold W. Smith, chief of the Division of Research. The institute will be concerned chiefly with the physical and mental conditions of aviators, submarine crewmen and marines. The scientific director of the new medical unit is Dr. A. C. Ivy, professor of physiology, Northwestern University Medical School, Chicago, who is now on leave of absence from the university; the officer in command is Capt. William L. Mann. The new institute is a component part of the Naval Center at Bethesda, which includes also the Naval Medical School, the hospital and the dental school.

★ ★

CHICAGO BEACH HOTEL BECOMES HOSPITAL FOR AIR FORCE

The Chicago Beach Hotel, on Hyde Park Boulevard, Chicago, has been taken over by the Army and is being remodeled for use as a hospital for the air forces technical training commands. The hospital will care for students in the new army air forces radio school, with headquarters in the former Stevens Hotel on Michigan Avenue, as well as those in other air forces schools in this area. The Chicago Beach Hotel was acquired through court order in the same manner in which the Stevens and Congress hotels, the Coliseum and other properties were taken over for the schools in Chicago. Col. Joseph J. Mack, executive officer of the hospital, is reported to have said that all rooms in the former hotel will become rooms for patients containing two or three hospital beds, except those on the ground, mezzanine and third floors. The ground floor will become a receiving room for patients, the trunk room a medical supply room, the medical detachment personnel will have their mess hall in the former dining room and cocktail lounge at the south side of the hotel, and the large lounge off the main lobby will become a mess hall for patients.

★ ★

COURSES IN NEUROLOGIC SURGERY FOR ARMY DOCTORS

Twenty-five U. S. Army medical officers from various parts of the United States began a course of training in neurology and neurologic surgery at the University of Illinois College of Medicine, Chicago, September 28. Similar groups of army officers will be trained during the next few months. The course includes laboratory, clinical and lecture work at the

Neuro-psychiatric Institute at the university and also clinical work at Cook County Hospital. The University of Illinois School of Medicine, Chicago, and Columbia University College of Physicians and Surgeons, New York, were the only schools chosen, according to the Chicago *Daily News,* for the special training of army officers in neurologic surgery.

SPECIAL NEWS

(This news was assembled especially for use in the J.A.M.A.)

Health Under Hitler.—According to the *Svenska Dagbladet,* Stockholm, of July 6, thousands of wounded Germans are being transported to Norway and the Norwegians turned out of hospitals to make room for them. Practically every hospital in the interior is requisitioned for the Germans, and the Norwegian patients are sent to school buildings which have been prepared for them. It was estimated that the transfer of patients would take until the end of July, during which period the hospitals will hardly be able to function. The press announces that civilian sick cannot be accepted for hospital treatment before the end of July, since the German defense forces have requisitioned the hospitals. According to the *Rjukan Dagblad* of July 1, after the German wehrmacht's requisitioning of Tolmark County Hospital it was decided that the patients must move to Soere Agricultural School, Ulofoss.

The *Neues Wiener Tagblatt* of July 4 describes the journey of a Danube steamer from Vienna to Durnstein with a party of wounded soldiers. The boat, which had been hired by the Wehrmacht's kommandantur Wien, Verwundetenbetreuung for July and August, will make the trip three times a week, carrying chiefly seriously wounded men. After two hours at Durnstein the boat returns to Vienna. The organization for the care of the wounded, in which Lieutenant General Stumpfl takes particular interest, deals with 100,000 wounded soldiers a month. The first lot of 500 soldiers was accompanied by doctors, nurses, a band, a quartet and singers. There were soldiers from all fronts, "from Lapland to Africa."

Otto Mattson, an expert of the Lund Anatomic Institute, stated in an interview, according to the *Social Demokraten* of August 6, that certain scientific instruments, such as binocular microscopes, barometers, thermometers and double polished glass, are unobtainable in Germany. High class cameras are difficult to obtain. It is not easy to obtain ordinary glass, which, however, is still being manufactured.

According to *Novo Vreme,* Belgrade, of June 18, owing to the shortage of pharmaceutic products and to prevent speculation, the sales of these articles are controlled. Castor oil, iodine, petrolatum and quinine are obtainable in future only on a doctor's prescription.

Children's stockings for months have been unobtainable in Finland, according to *Helsingin Sanomat* of August 4 and shoes are seldom seen. It is said to be impossible to find even the most modest clothes for children, although adults can still buy clothes.

According to the *National Zeitung,* Berne, July 16, reports are that German soldiers fighting in Russia are now being smeared with a preparation to protect them against lice. The preventive is the outcome of experiments made by Hitler's doctor, Professor Morell, who found that lice placed on horses fell off dead. He discovered that the reason was horse perspiration. The anti-lice mixture, which is also said to possess frost protective qualities, has reduced the number of cases of typhus among the German troops, the paper adds.

According to the *Deutsche Wissenschaft, Erziehung und Volksbildung* of June 20, the minister of the interior has advised all volksgenossen who for professional or other reasons pay a visit to occupied countries, the government general or foreign countries, to have themselves vaccinated against typhus and paratyphus. Those who are going to visit any of the occupied eastern areas or the government general are advised also to be vaccinated against spotted typhus. The vaccine is obtainable from the Robert Koch Institute and from the Behring factories in Marburg a. d. Lahn.

According to the Brussels radio of August 1, the Ministry of Economic Affairs warned against the danger of gas poisoning, since the quality of gas for lighting has deteriorated and contains a higher amount of "coal oxide." It is more necessary than ever, the announcer warned, to be sure that no gas escapes anywhere.

J.A.M.A.

Original Articles

THE PHYSICIAN AND THE PROBLEM OF THE ALCOHOLIC DRIVER

Lowell S. Selling, M.D., Ph.D., Dr.P.H.
DETROIT

My topic needs no introduction to the physician. As a citizen he is confronted with constant demands from traffic authorities for him to do his part in the elimination of accidents due to the alcoholic driver. As a member of a highly specialized profession he is expected to take the scientific material on the subject and translate it in such a way that it can be used by laymen. As an individual whose life is dedicated to the practice of prevention and cure of disease and injury, he has a specific responsibility in terms of treatment of those who are injured in automobile accidents which result from someone's ingestion of alcohol, and, in a more indirect sense, he has the responsibility of the elimination of those individuals who are so effected by alcohol that they are potentially dangerous when driving cars.

To the physician who has not given direct attention to this problem of dealing with the drunk driver or the drinking driver the solution seems simple. He thinks very much as the layman does but brings to bear upon his thinking his special knowledge of the general effects of alcohol upon the human system. When he engages in this type of thinking he may very well carry out his responsibility but, on the other hand, he may miss opportunities to show his professional ingenuity and to apply new and special applications of his scientific knowledge.

The Problem — The problem of the alcoholic driver can be divided into three main parts: The first is the determination of what alcohol does to the system of the driver, particularly to his nervous system, which would result in his being more prone to have accidents.

The doctor's second responsibility lies in the application of such knowledge as there might be about the action of alcohol on the patient to determine, first of all, whether the patient has been drinking; second, whether the alcohol which has been ingested has effected his ability to operate a motor car; and third, to make a prediction as to the likelihood of his continuing to drink at times and in a manner which would effect his driving.

Last, there is an element of particular interest to the physician in his responsibility to courts and to law enforcement agencies. Here he has a duty and obligation to serve as an expert witness in cases of alcoholic drivers.

Concepts of the Alcohol-Driving Problem — In answer to the question which was brought up by the first topic, the medical man must admit certain premises. The first is that alcohol is a drug which effects a person's ability to go through certain mechanical manipulations. Researchers on the subject, and there have been a myriad of them, have not entirely agreed upon the effects of alcohol. In some types of performance the individual is able to carry on a routine activity requiring either mental or phys-

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ical agility in a faster-than-usual manner. A test score may be effected favorably or unfavorably, but as the dose increases markedly motor-coordination apparently decreases.

Just where the point is reached where motor-coordination advances to a danger point has not been determined as yet. Herman A. Heise[3] of Milwaukee has been a leading investigator in this field. In an analysis of 119 automobile accidents, which he made in 1934, he was able to show that there was a measurable loss of efficiency and judgment in the alcoholic even when very small amounts of alcohol were accumulated in the blood or urine.

It was Heise's opinion that if one judges a person to be sober as long as he can "still walk and talk" one can make no valuable determinations from a statistical standpoint. In Heise's investigations he found, too, that the drinking driver was involved in many of the accidents and he recommended that a chemical test for alcohol be used in aiding in the conviction of drivers who had been drinking. Alvhh R. Lauer[6] concluded in 1939 that a noticeable effect on behavior occurs somewhere between thirty-five and sixty-five milligrams of alcohol per hundred cubic centimeters of blood and that the greatest loss of efficiency is found in the abilities related to judgment, wherein a deficiency of about twenty-five percent was noted. Performance showed twenty-three percent loss, while sensory capacity showed only a fourteen percent loss. It was his belief that while the effects of alcohol are variable with individuals, even small amounts are potentially dangerous and the direct effects relating to driving seem to be (1) inconsistency in performance; (2) decreased tolerance to glare; (3) an increased reaction time; (4) poor observation; and (5) a tendency to speed up and be less cautious.

Clinical Observation of Alcoholic Drivers — Alcoholic cases are frequently referred to the Psychopathic Clinic of the Recorder's Court. The Clinic's intake, however, is highly selected. Inasmuch as it only sees between five and six hundred cases a year, and more cases than that are occasionally seen on a Monday morning in the Traffic Court, it takes a great deal of obvious pathology on the part of the offender to render him noticeable to the Judge.

The Judge will send to the Clinic cases who have an extremely bad accident, who seem to be insane or feeble minded because they respond poorly to his questions, who have a bizarre appearance in Court, or because the officer says that their conduct while driving was bizarre. The reason for their bizarre conduct may be alcoholism, and this may justify the Judge in referring the case to the Clinic even though there is no suspicion of insanity. The case load then is highly selected. It is heavily weighted for the insane, feebleminded, the pathological both in body and mind, and for the alcoholic.

About a year ago I made a special study of the alcoholic traffic offender[7] and I observed that it took from the middle of December, 1939, until early in August, 1940, for one hundred alcoholic cases to pass through the Traffic Division of the Clinic. During that same period of time 248 cases in all were seen so that about two-fifths of the clinic cases were alcoholics of one or another kind.

This does not mean that two-fifths of all of the cases who come before the Court are alcoholic — that would be a fallacy for the actual percentage is extremely low. Nevertheless, the dramatic quality of offenses committed by alcoholic drivers and the frequent use of alcohol by drivers who get into rather dramatic accidents attracts attention to cases of this sort so that they are more frequently brought to Court, more frequently reported in the newspapers, and more public reaction is noted against them.

The gross results of this study of one hundred cases indicated certain points which should be of interest to the physician in considering the whole problem. First of all, there are really three distinct types of alcoholic drivers and a knowledge of these three types is necessary before the physician can bring his scientific knowledge to bear upon the problem.

The Mild Drinker — The first type is the mild drinker, the individual who takes but little alcohol. We have a large amount of these so-called one-drink alcoholic traffic offenders who were arrested after they had consumed only a small amount of alcohol but who have had serious accidents. It is almost impossible to

show that these people were involved in an accident because of their consumption of alcohol. The amount that they drink is less than the standard that has been recommended by either the American Medical Association[5] or by the National Safety Council[5] as minimum for the classification of the driver as alcoholic, but the frequent admission found in histories which have been taken on drivers who have been in serious accidents reveals a large number of these drivers to have had a drink or two. Holcomb[4] in his study made in Evanston in 1938 showed that more people who were involved in accidents were drinking than the general run of drivers on the highway in the area studied. This does not completely answer the question which is continually being asked, whether the two-drink driver is an accident-prone driver because of his two drinks. I think that a case can be cited which gives one perhaps a little better idea of the significance of the so-called two-beer or two-drink driver.

A young man was referred to the Clinic because he had had a series of five accidents. He drove continually and claimed that he put between thirty and forty thousand miles on a car during a year. He was never arrested for drunk driving but on each occasion when he had an accident he had been returning from work after a fatiguing day, had not yet eaten his supper, and had stopped at a bar to refresh himself. In his particular case, since he was free from accidents at other times, one can easily see that the ingestion of even a small amount of alcohol coupled with his empty stomach and with his already susceptible nervous system due to his fatigue resulted in his being a menace on the highway.

I do not think that anybody can give a general rule about one and two-drink drivers. Certainly there must be many thousands on the street whom we do not detect, who are never brought before the Court, and who should not be labeled as alcoholic traffic offenders merely because they happened to have had a drink or two before a particular accident. But a study of the ancillary data, about the driver's nutrition, fatigue, state of mind, attitude toward driving, arrest record at other times, will give the doctor a chance to evaluate the light drinker, and, from my own standpoint, I have come to the conclusion that there is always an element of risk if one drives with even a small amount of alcohol in him.

Most individuals whom I know are willing to drink before they drive. They take a cocktail or two, they may perhaps have a highball before dinner, rarely they have wines and liquor during dinner, but they often sit around during the evening playing cards or entertaining themselves in other ways and taking a mixed drink of some sort.

These people don't seem to have any fear that they will get into difficulty if they drink as much as they do, and from my own experience, I know of no one, out of hundreds of people who have this type of recreation who has gotten into an accident. Nevertheless, each one of these drinkers is potentially dangerous. There may be a critical moment when his slowed reaction time might aid him in the siuation. There might be slight dimunition of his visual acuity: others of the psychological or psycho-physical traits may be impaired, even though the degree of impairment is so slight as to be not measureable.

The Acute Alcoholic — The second group of alcoholics which is interesting to the physician are those who have definitely ingested enough alcohol to get them in trouble. These people are most easily detected through tests of blood, urine, and the tests devised by Heise[3], Harger, Lamb and Hulpieu[2] and Greenberg and Keator.[1] I will spare you the mechanical and chemical details of these various types of equipment but I will say that they have all shown a reasonable degree of reliability, in fact so much reliability that their use in Court has been advocated by no less an organization than the National Safety Council.

The Chronic Alcoholic — A third type of problem driver who is dangerous because he drinks is the chronic alcoholic. Chronic alcoholism is perhaps not too easy to define verbally but it is a more distinct clinical entity than either of the two types that I have discussed previously.

The chronic alcoholic may be an individual

who drinks a considerable amount of liquor daily or he may be a mild imbiber for a few days during the week and an extremely heavy drinker on week-ends. Not infrequently patients who show extreme symptoms of chronic alcoholism become psychotic because of their drinking. They may develop an alcoholic hallucinosis, delirium tremens, or Korsakoff's syndrome. Men who drink enough to become psychotic do not, in my experience, very frequently become problem drivers. The problem driver in the chronic alcoholic group is usually an individual whose nervous system has been only mildly impaired, so little that a lay observer, such as the arresting officer or the traffic judge, does not note the symptoms of alcohol saturation but, on the other hand, enough so that his judgment is impaired and his mental condition is not as good as it should be for driving a car.

There is no way of carrying out a controlled research program on these people. We cannot give them tests of reaction time, visual acuity, perimetric status before they become chronic alcoholics and then retest them later, as we do not know which ones are going to become chronic alcoholics. They are almost never brought to the attention of a physician until the symptoms become at least threatening.

It is certainly true in the Clinic's experience that the reaction time of the confirmed drinker is slower than that of the population as a whole, and we find more visual errors. But chronic alcoholics are usually a decade or two older than the general run of traffic offenders and some deterioration in the psychophysical findings is to be expected, regardless of the alcoholism.

I can make the very definite statement, however, which is based on my experience, that chronic alcoholics as individuals possess traits and weaknesses which do make them very definitely more dangerous as drivers. It is unfortunate that the present research trend is toward statistics, for individual cases often come before me who have proved to be dangerous to a convincing degree, yet no comparable figures are available.

The attitude of mind that the chronic alcoholic has toward his habit and his inability to control himself and stop drinking, even though he knows that he deserves social disapproval, indicates a lack of self-control which we find to be transmitted into the sphere of driving.

The chronic alcoholic rationalizes. He explains that he has now become so tolerant to alcohol that it has no effect upon him. Even the chronic alcoholic who has not gotten in trouble with the law demonstrates poor judgment. He is not willing to concede that his drinking is harmful to himself or to others even though he may be wrecking his home or failing to carry out community obligations.

Many chronic alcoholics are able to work regularly even at fairly delicate operations, and they will use this argument to indicate how well balanced they are even though they may take more alcohol than the general run of workmen. They are, as a general rule, inadequate and compensate for the inadequacy by drinking and thus become very egocentric. Quite often they become more and more inadequate as they run from reality into the foggy atmosphere of alcohol.

The Physician's Obligations — The physician has certain obligations toward the drinking driver. It is probably not within the sphere of the family doctor's activities to advise the casual drinker not to drink and drive unless he has shown bad judgment to such an extent that he is considered a menace in the community or has been in trouble with the law. As socially adjusted members of the profession, we do not ourselves come entirely before society with clean hands. Many physicians drink and drive. Many of our colleagues have a tendency to flout the law with regard to speed and other regulations and use the argument that our duties cause us to ignore these regulations because we have responsibilities in the matter of saving lives. There are many physicians, who, because of this point of view, will not obey the law even when there is no emergency.

We cannot do more than express theoretical disapproval of any driving after even small amounts of alcoholic ingestion. We do, however, have responsibilities toward the two other groups of drinking drivers.

First, there is the individual who is arrested because he apparently took more alcohol than was good for him at the time and then got into an accident or violated a traffic law. In

such a case it is necessary to show that the man has been drinking more than he should. Quantitative tests, as I have indicated above, are available for determining the concentration of alcohol in the body. These tests are used by many State police departments and they have been supported by decisions of State Attorney Generals in several states including Illinois. In some states it has been ruled that drivers who are suspected of being drunk at the time of arrest may be forced to submit to quantitative tests of their body fluids.[9]

There are two definite weaknesses which are apparent in the use of quantitative tests of alcohol in the case of drinking or drunken drivers. The first one is that nowhere does there seem to be emphasis on the fact that the accuracy of these tests is dependent upon the skill of those who administer them. Certainly they have proved their worth in the hands of the experts who have devised them, but the intention seems to be on the part of those who have constructed such tests that they should be so simple that they could be operated by any police officer. If the Courts are going to depend upon chemical tests alone, a second fallacy comes into play, and that arises from the situation that the alcoholic concentration in the body does not necessarily agree with the danger point of the behavior of the individual. Chronic alcoholics with high alcoholic concentrations have proved to be mechanically competent to drive a car in some cases.

In the case of the first group which was discussed above, those who have had only a couple of drinks of beer, the alcoholic concentration is not high enough to mean anything on these tests and yet the behavior is definitely antisocial and, in some instances, definitely beyond the ability of the individual to control it.

Because of the availability of such tests as these, the physician must not allow himself to come into Court to testify as to the alcoholism or non-alcoholism of a particular individual at the time of his arrest without having availed himself of one of the accepted quantitative tests. Evidence with regard merely to the patient's behavior is not sufficient in my mind either to prove or disprove the influence of alcohol, and I have seen physicians who have based their opinion upon the clinical examination and found themselves in an embarrassing position because they had not covered the whole ground.

A physician who is placed in such a situation as this finds himself in a position very much like his dilemma in certifying the presence or absence of paresis without serological tests. Certainly a clear-cut paresis can be diagnosed without the use of serological tests, but if there is a sufficiently important point at issue to bring the man into Court to determine his sanity and the presence or absence of paresis, a physician would lose face if he were confronted with negative serological evidence before a jury.

The physician is well advised to look at a case which involves drunk driving from a very definite self-interested point of view. Most of the contacts that I have had with private physicians who have come into Court in cases which have involved drunk driving have concerned family physicians who, because they know the individual as a patient, find themselves subpoenaed as witnesses for the defense. This defense may demand that the physician state that the patient's misbehavior in his opinion is not due to the drinking but rather to the ingestion of drugs, to fatigue due to overwork, or to some physical ailment. In the eyes of the clear thinking jurist there is little distinction to be made between the man who drinks and does harm and the man who is so sick that he is unable to control his motor car and avoid accidents. There is as much justification in revoking the license of the epileptic, of the cardiac who has frequent syncopes, or of the patient who dopes himself with sedative drugs because of pain, as there is in revoking the license of the drunk driver. All of these patients are equally dangerous; the etiology and culpability may be different, but the effect on the community is the same. The doctor does not benefit his patients by substituting a defense plea of sickness for one of drunkenness, even though the patient rightly assumes that the community attitude will be more favorable and lenient towards a sick person than towards one who has been drunk.

There is a second responsibility which the physician who knows of the chronic alcoholic is forced to assume. I do not believe that we are yet in such a state of enlightenment that our patients would feel that physicians to whom

they come with confidences should report their condition to the licensing authorities in order to have their licenses revoked. In many instances this is done, however, and justly done. To do it requires that the physician carry out preliminary education so that the patient will understand why this physician has to take the step that he does. Among traffic cases there is an example that I have cited time and time again — the case of a neuro-surgeon who removed a large part of the cerebral hemisphere on one side because of a brain tumor and who told this patient that he must no longer drive. When the patient continued to drive the surgeon informed him that he felt it was his duty as a citizen to request that the patient's license be revoked. The matter was made as clear as possible to the patient before the physician took his step and there was no unfavorable repercussions.

Whether such understanding could ever be brought about in the case of the chronic alcoholic, where the physician is attending him either for a concomitant ailment or for the alcoholism, is doubtful. Chronic alcoholics are too defensive and have too little understanding of their own problems. Nevertheless, in many instances, the physician may find that his relationship with these individuals is such that he can either curtail or force discontinuance of the driving.

CONCLUSION

In conclusion, then, let me point out that this is a matter for serious consideration on the part of all medical men.

First, alcoholism itself is a serious problem and even small amounts ingested by individuals who are likely to be driving their cars makes these individuals potential menaces on the highway.

Second, the physician who is asked to testify in the matter of whether an accident occurred while the man was under the influence of liquor should acquaint himself with the literature on the subject, which is vast ([8,9]). He should make an examination of the man at the time that he has his accident. He should if possible make a quantitative determination of the man's blood alcohol and observe his conduct closely, and he should be careful not to be brought into Court *ex post facto* to defend the man on the grounds of physical ailments.

Third, chronic alcoholics in the individual physician's practice place upon him a great deal of responsibility in the matter of putting pressure upon them to discontinue their driving

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STATUS ASTHMATICUS

JOHN PETERS, M.D. F.A.C.P.
OAK PARK

The vast increase in number in the different branches of clinical medicine has produced many specialties; the patient no longer feels that one man can have sufficient knowledge and experience to be competent to care for all his ailments —be they physical or mental.

Occasionally, the specialist becomes so enthusiastic in postmortem pathology, that he neglects to study the functional disturbances in patients without organic diseases; on the other hand, for lack of time, the general practitioner is not able to follow the progress made in the various specialties. As a result, the patient not obtaing relief, travels from one doctor to another until he is forced to become a victim of quacks.

I will attempt to describe this syndrome and will enumerate the essential facts in the management of allergic individuals in status asthmaticus. The most useful methods will be presented in detail.

Bronchial asthma is as old as man and is a common occurrence in the human. It has been estimated that approximately one-tenth of the entire population have a major or minor sensitiv-

ity in various forms, and not infrequently, it may become severe to the point of syncope, extreme dyspnea and state of exhaustion. This has been called status asthmaticus, intractable asthma, or asthma crisis. I would prefer to call it accidental pulmonary crisis, resulting from the inadequacy of recognized methods of treatment, and therefore preventable.

Many theories have been advanced as to the etiology and mechanism of bronchial asthma, none of which are completely satisfactory. Let us for a moment discuss the etiological factors responsible for the allergic manifestation. Not all wheezes are allergic, and allergy alone is inadequate to explain all cases of asthma. It is time to encourage serious consideration of the possibility that either in connection with allergy or quite independent of it, there is some change in the physiology or the chemistry of the organism which forms the fundamental basis for the asthma and the other symptoms that make up the asthma syndrome.

In most cases, asthma depends on a hypersensitiveness which could be due to ingestants or inhalants. The clinical history of patients with asthma due to external causes is usually clear. At the right time and the proper place the patient is free; but in the wrong place and at the wrong time of the year, he will develop asthmatic attacks.

The relationship between symptoms and exposure to the specific substance is direct and is usually demonstrated easily by hospitalizing the patient. Skin tests with the offending substance are positive in cases which are due to external causes, but not all asthma can be explained in this way.

Quite often the attacks start with a cold, but in other cases the relationship to colds is not clear. It is this kind of asthma that is apt to increase in severity until at length, the condition may become desperate and the patient is said to be in acute pulmonary crisis. Such patients do not improve in a few days in the hospital as do the types due to external causes, evidently because whatever the cause, there is something which they carry with them into the hospital.

Many of these patients have had asthamtic bronchitis which lasted for years. They usually give histories and evidence of nose and throat difficulties, either in the past or at present. Most of these patients have had polyps removed and polyps present at their examination. About one-fifth of these patients have had operations on the nose and throat and none of them derive any benefit from such operations.

The history shows that the wheeze began insidiously without a preceding illness or change in residence, occupation, environment or season.

Asthma and the Weather — Among the nonspecific causes of bronchial asthma, weather changes must be considered among the most important. A knowledge of the direction of the wind and the approach of bad weather can help us to understand the patient's present symptoms and often predict the degree of health he will enjoy during the following days.

Anyone who will take the trouble to learn these facts will greatly profit from it. It is best to start by taking certain patients for study and recording their good and bad days. It will soon be learned that there are patients, who without their knowledge, exactly follow the barometric pressure.

After a month or so, these patients can be used as indicators, and it will be learned that whenever they have symptoms, almost all the patients of their group will have symptoms. When these indicator patients are well, all other patients in this group will usually be well also.

For a period of three years we checked and recorded the atmospheric pressure and frequently could predict a day in advance, the reactions upon our patients. It was of interest to note that all patients who were subject to weather changes, irrespective as to their location within the affected area, would have asthmatic attacks within several hours of each other. But termination of the attacks did not hold true to form. This offers an explanation for the asthmatic attacks which are not due to other causes.

Heredity — Heredity as a factor has been much debated, Dr. B. Ratner[1] in studying a large group of allergic and normal children was unable to find a greater incidence of allergy in the families of the allergic group. He believes that the development of sensitivity is due to a chance occurrence of certain factors and not a heredity mechanism.

However, I firmly believe that heredity is a very important factor. I fully agree with Dr. Kranies[2] that one of the most important and difficult factors in neurosis is the hereditary one. Many allergists agree that an unstable nervous system could be responsible for asthmatic attacks, urticaria, and various forms of dermatitis.

Statistics reveal that feeble-minded patients spring from a long line of feeble-minded ancestors and can rarely be made into intellectual giants. Many depressive patients are the results of their forefathers and will follow the same course as their forbears.

Neurological and Psychological Factors — Vagatonia or vago-sympathetic dystonia has always been considered a factor in the allergic; in fact, the entire nervous system is internally connected with mechanism of allergic response. Strauss[3] maintains that the nervous system is the seed of essential pathological lesions, contending that the symptoms depend on a spastic contraction of the bronchial muscles which is of excitomotor reflex origin, and that the extent of involvement differs in every case.

In some, it is restricted to the nervous system of air passages, and in others in the gastric or pulmonary portion of the vagus. The source of irritation in some cases may be the brain, and in others may be of humoral origin.

In recent years, due to the interest in physchoneurosis, attempts have been made to ascribe the onset of asthma, urticaria, or other allergic conditions to such psychic factors as: fear, anxiety, anger, and other emotional states. Numerous cases have been reported in which the cause was attributed to psychic-stimuli, psycho-therapy, including removal of the psychic-stimuli by hypnotic suggestion was followed by relief or cessation of allergic attacks.

Clarkson[4] in the analysis of the nervous system of juvenile asthma makes the observation that the following features in varying degrees are common in every case: intensification of emotion disordered by a chemistry habituation reflex (grouped around fear) an escape from reality and a definite psychosis. He also emphasizes that a potential allergic child is born with both a psychic and somatic handicap. Such a child becomes an ego-centric or an overly-receptive adult with a predisposition to react to all types of stimuli.

The mechanism which produced the allergic phenomenon is of great interest. Theoretically, it is assumed that anti-bodies responsible for the allergic reaction become attached to the cells of the body tissues, especially in the so-called shock organs and subsequently, one of the antigens with its anti-bodies produces colloid upset in the cells. This phenomenon may be brought about by inhalants, such as: pollen, dust, etc. or by injections, or by ingestants of food, drugs, or by contact with any material the individual be sensitive to.

The mechanism which produces these various reactions may be said to be analogous to circulatory failure of the capillaries, resulting from physical or traumatic shock. Circulatory disturbances originating in the pulmonary capillaries, resulting from physical or traumatic shock. Circulatory disturbances originating in the pulmonary capillary stream have not *received much deserved attention.* But from all indications, in the experimental field, it may prove of greatest value. It has been shown that capillaries possess tonus contractibility independent of adjacent arteries and veins. Capillaries and endothelium are delicately sensitive and exceedingly susceptible to a variety of materials producing capillary permability, allowing the plasma to escape into the tissue producing edema and frequently serious effusions.

The syndrome presents a characteristic group of features resembling those of allergic shock. Any agent which will produce a wheal when applied locally will reproduce the syndrome of shock if its effects are induced systematically. Histamine, bacterial toxin, peptones and proteins to which an individual is sensitive, will produce a wheal when applied locally.

Ebbecke[5] maintains that wheals are analagous to shock. It has been suggested that hyperactivity of the sympatho-adrenal system, excited by pain, irritation to the tissues or emotional reaction, may result in a maximum arterial constriction. If long sustained, it might reduce the delivery of oxygen sufficiently to cause tissue anoxia, and thereby to initiate the operation of the same vicious cycle.

The symptoms produced in these cases presents a characteristic group of clinical features,

resembling that of capillary shock. The patient is weak, restless. The pulse is rapid, respiration is difficult, the extremities are cold, the body temperature is low. The face is drawn and anxious in expression and moists with cold sweat. He is profoundly depressed. If this condition is prolonged, the eyes become sunken and surrounded by bluish rings producing a Hippocratic Facies. The respiration becomes more rapid and shallow and death may occur.

The laboratory findings in these cases are fairly consistent. There is hemoconcentration with a high hematocrit reading. There is also a high leucocyte count with an increase of eosinophilia, varying from ten to as high as fifty-seven per cent. The sedimentation rate is usually normal unless associated with acute infections. The urine in most instances is decreased, probably due to dehydration. Electro-cardiograms are normal unless there is cardiac involvement, which is quite common in the chronic cases. X-Ray films of the chest reveal the emphysematous type.

Pathology of Pulmonary Crisis — The chief recognized pathology of Status Asthmaticus involves the tissues within the lung itself. It is generally agreed that one who has had frequent or severe attacks exhibits the following changes in bronchial structure:

1. Engorged epithelial cells
2. Thickened basement membrane
3. Hypertrophied muscle bundles
4. Increased size of mucous glands and an increase in the number of lymphoid, connective tissue and eosinophilic cells in the sub-epithelial and extra-muscular layers

The increase in size of the mucous glands is due to an over-activity of the mucous-producing cells, the distention of the gland ducts and areas of round cell infiltration.

These cellular collections are probably evidences of chronic infection. The increased exudation from the mucous glands into the gland ducts and thence into the lumina of the bronchi and the stronger contraction of the hypertrophied muscle bundles, combined with the actual increase in wall thickness, acts simultaneously to increase the stenosis of the tube. The smaller bronchi are occluded completely by this sticky, tenacious mucous that is produced in such large quantities, so that the passage of air is stopped completely.

The differential diagnosis from cardiac asthma is very important. Cardiac asthma is characterized by a feeling of suffocation, intense desire to breathe deeply, prostration and wheezing, bubbly sounds in the chest, plus the expectoration of frothy phlegm.

It is usually a substernal oppression which is very intense. The edematous character of the rales and the tendency of the sputum to be frothy and streaked with blood is marked. There is a real resemblance to bronchial asthma in certain cases, but the cardiac asthma appears to depend upon the acute left ventricular failure with engorgement of the pulmonary circulation, with or without edema and partly on local or central nervous stimulation, whereby the asthmatic type of breathing is produced. It is possible that the acute pulmonary stasis during sleep induces reflexly the asthmatic breathing.

In true bronchial asthma, a careful history and skin tests will disclose definite sensitivity; the elimination of which or immunization against will result in relief. However in the long standing asthmatic, especially in those past middle-life, there are structural changes in the lung resulting in emphysema with increased resistance to the flow of blood through the pulmonary vessels, with an increase in intra-pulmonary blood pressure which results in right heart failure.

The treatment of cardiac asthma is first to reduce the irritability of the vital centers, this is accomplished by the administration of sedatives such as morphine. The second aim is to improve cardiac function, which is accomplished by the usual cardiac measure.

Management — The management of these cases will be described in detail and in order of their importance.

Emergency Treatment

a. Isolation. The patient must be isolated; friends or relatives are not permitted to visit with the patient. The nurses must not visit the patient oftener than general medical care requires.

b. Room. Should be dust and pollen free. Mattresses and pillows should be rubberized. The patient is to be kept in a semi-reclining position

and the room is to be fairly dark. The room temperature is to be controlled between 68 and 70 degrees Fahrenheit, with a humidity of approximately fifty per cent. All articles that are dust containers, such as: rugs, curtains, and stuffed furniture, should be removed. Fans or any other apparatus for controlling circulation of air in the room are not allowed.

c. Epinephrine. Epinephrine should be given in doses not to exceed 0.5 cc of one to one thousand and may be repeated every fifteen minutes for four or five doses. It is to be injected intracutaneously for more rapid absorption and at several points distant to each other. If relief is not obtained within one hour, its use must be discontinued. Many patients treated with this drug for some period of time become adrenalin fast. Epinephrine exhibits certain peculiarities that have not been sufficiently stressed. In large amounts or in small continued doses it will produce a clinical and pathological picture of shock, therefore defeating its own purpose. In many instances, the discontinuance of its use for several days will re-establish its efficiency. To counteract adrenalin reactions, such as: pallor, tremor and tachycardia, place a tourniquet above the seat of injection for several minutes and all symptoms will be abated almost instantly.

d. Adrenalin in oil may be given in 1.0 cc doses intra-muscularly at four hour intervals for a period of twenty-four to forty-eight hours. This may be the method of choice, if the patient can be kept asthma free for this length of time, the vicious cycle will be broken.

e. Helium-oxygen mixtures. In the most severe stages of asthma, about six liters of this mixture of eighty per cent helium and twenty per cent oxygen should be used.

As the spasm is relieved, the rate of flow can be reduced to five, four, or three liters per minute or the oxygen supply can be increased to one, two, or three liters per minute, so that the total amount of gas supplied from the two tanks will total six liters per minute. When the recovery is complete, the helium mixture can be stopped and oxygen alone continued, but must not be used in excess of twenty per cent.

f. Rectal. Ether and Olive Oil. In cases where the above methods have failed, ether and olive oil may be tried with certain precautions. Relief, when secured by anesthesia, is slow and gradual requiring from twenty to thirty minutes; hence ether-olive oil rectal anesthesia should be, in my opinion, a last resort.

Technique: no preliminary cleansing enema is given, for it disturbs the patient whose respiratory difficulties are extreme and in whom rest and the absence of any physical effort are prime essentials. The rectum tube should be inserted slowly and not beyond the internal sphincter, the patient lying on the right side as flat as orthnopnea will permit. The injection should be given slowly, a few cc at a time, allowing twenty minutes for the entire procedure. The average dose is from 5 to 7 ounces. A 12 year old child requires about 3 ounces.

Use equal proportions of olive oil and surgical ether, employing an egg beater for 1 or 2 minutes. Care should be taken to use pure olive oil to avoid the risk of cotton seed or peanut oil sensitivity.

The anesthesia is usually light, never to the extent of occasioning any worry. Excitement and vomiting are seldom seen during the anesthesia induction. The duration of the anesthesia is usually several hours.

After from ½ to 1 hour of anesthesia, other methods such as epinephrine, previously unavailing, will become effective in comparatively small doses.

g. Intravenous injections of five per cent dextrose in normal salt is often life saving. The human body is provided with a delicately balanced mechanism for regulating the transfer of water between the blood and the tissue in either direction. The tissue constitutes a reservoir from which the fluid may be drawn into the blood if needed. When much fluid has been lost by perspiration and rapid respiration, the water supply being limited, the tissues become dehydrated, producing permeability of the endothelial membranes which allows the protein and plasma to escape into the adjacent tissue, thereby producing edema of the pulmonary tissues — continuing the vicious cycle.

It is for this reason that the water balance must be maintained. If too much fluid is given, it may wash out the necessary protein and plasma and defeat its purpose. To guard against such errors, we have adopted the following rule.

ADULTS

Fluid Intake

50 Kilo—give 3000—in 24 hours
70 Kilo—Give 4000—in 24 hours

IN ACUTE EMERGENCY—give 1000 cc in first hour, 500 cc in second hour, and then at the rate of 6 cc per minute.

CHILDREN
AGE

-3-

more	less
Dehydration	Moderate
50 cc per Kilo	75 cc per Kilo
Dehydration	Severe
100 cc per Kilo	125 cc per Kilo

The younger the child, the greater the fluid requirement per unit of body weight

Certain precautions are wise. If hemoconcentration is over sixty per cent of said volume, it is unwise to use large quantities of hypertonic solutions because of danger of bringing into circulation cell water, which is rich in electrolites and is definitely toxic when present in the plasma in quantities greater than normal.

In desperate cases, we add half a cubic centimeter of epinephrine, one to one thousand, well mixed with the dextrose in saline solution; however this practice must not be repeated too frequently.

Sedation — If absolutely necessary, Nembutal Suppositories, grains three, at six hour intervals; in extreme cases pantpon. Pantpon does not act as a depressant upon the respiratory system as morphine does and patients are less likely to be sensitive to the drug. We dissolve the pantpon, grains one-third, in 0.5 cc of adenalin and inject intra-muscularly at the rate of one minum per minute until relief is obtained.

Other drugs — There are no drugs of specific value. Some have benefited a few patients, most of them have failed. I am convinced that drugs are not readily absorbed from the gastro-intestinal tract under such circumstances and therefore are valueless.

Psycho-Therapy — When the emergency period is over and the patient is well controlled, psycho-therapy acts as a means of support to hold up the patient and carry him into a sphere where he can be helped to a complete recovery. It has been frequently advocated that a reputable physician must frequently deviate from medical ethics and promise a cure in order to effect a cure, in a chronic, misguided, nervous patient.

Dr. T. A. Ross, a British author on Psycho-Therapy, declares, "Doctors who sit on the fence, who are always guarding themselves against somebody's saying later that they made a mistake, are great creators and confirmers of neurosis."

The physician must remember that a nervous patient believes in what he feels just as firmly as the well person and therefore must not be argued with. Many physicians will tell their patients to snap out of it, but most of these patients can not get well on will power alone.

The first interview with these patients is very important, especially with women — they may disclose their subdued fears on their first visit but deny them later in order not to distort the impression they hope to have created on the doctor.

The patient must not be told that his illness is a neurosis. The physician must spend ample time to educate his patient in the study of allergy in order to convince them that they are not suffering from an incurable organic disease. This is a process of education by which he is lead to look squarely at his limitations without feeling sorry for himself.

They are to be educated to lead normal lives; unusual strains must be removed from their lives the same as allergens. Many of these patients do not want to get well, in fact, asthma is quite a convenience. To illustrate, I was called to see a female patient, age thirty, who had had asthma for five years.

From observation of the patient's behavior and the infrequency of her attacks, it was apparent that her asthma was of a nervous origin. I was informed by a friend of the patient that she was very much in love with the husband of her sister and had intimate relations with him at frequent intervals. If he paid any attention to other women in his place of business (where she was also employed) she would develop an asthmatic attack.

I informed her that her attacks were a defense mechanism and were likely the results of a love affair. She became very indignant and left my office. For the past two years, however, she has not had a single recurrence.

These patients have a mental idleness. They must develop some hobbies to keep themselves busy. They should be urged to take greater interest in their community affairs, develop hobbies, think less and work harder, and last if not least, not to look for miraculous cures.

Common sense should make us realize that to do justice to the sick individual with completeness and accuracy, there can be no such thing as treating sick organs, and the patient as a whole be forgotten. Sir James Paget declared:

The patient says he can not,
The doctor says he will not,
The truth is that he can not, will.

To substantiate the merits in the care of status asthmaticus as outlined in this article I will present a short symposium of two patients in a series of ten cases which we have treated in the hospital in the year of 1941.

Case 1. A male patient, age twenty-eight, was admitted to the hospital on September 5, 1942 in a state of very severe asthma, which had been in progress for five days. His red blood cell count was 5,200,000; Hemoglobin 96%; Leucocyte count was 8,000, with an Eosinophilia of 6%; Hematocrit reading was 44.2.

Upon admission to the hospital he was given 1500 cubic centimeters of five per cent dextrose in normal salt. Nembutal suppositories, grains three, were used as a sedative. His symptoms abated within twenty-four hours and within three days he was discharged as completely well.

Case 2. A female patient, age fifty-two, was admitted to the hospital August 9, 1942 with a severe attack of asthma which had lasted for seven days. All forms of treatment gave no relief and she was adrenalin fast. Her red blood cell count was 5,500,000, Hemoglobin 105%; Leucocyte count was 8,000 with an Eosinophilia of 10%; Hematocrit reading was 44.4.

She was given 3000 cubic centimeters of five per cent dextrose in normal salt within twenty-four hours in divided doses, and phenobarbital, grains one-half, at four hour intervals. The dextrose in saline was repeated on several occasions. She gradually improved and on August 17, 1941 was discharged from the hospital free of all symptoms.

In order to conserve time and space I have omitted the detailed description of the other eight cases treated during that period. Their symptoms were similar and treatment was followed according to the above described outline, with similar results.

SUMMARY AND CONCLUSIONS

Status asthmaticus could be avoided if the physicians were familiar with the etiological factors and general management as outlined in this presentation.

Many theories have been advanced as to the etiological factors in the allergic individuals. The theory of heredity can not be denied.

The nervous system is the trigger mechanism responsible for the altered reactions in allergic indivduals and is the underlying factor in capillary permeability which plays such an important role in edema of the tissues and one which has not received sufficient attention.

I have outlined in detail and in order of their importance the principle methods of application and have described them under three different headings, namely: *The Emergency Treatment,* which deals with the acutely ill patient who has been in a severe attack for several days and has not been relieved by the ordinary methods of treatment; *The Psychological Factors* which are often responsible for the immediate condition We must prevent *subsequent attacks.* To do this, we must supervise the patient for several years, teach him the principle causes which produce allergic reactions and are responsible for his difficulties. Patients must develop a philosophy that it is better to live with and tolerate minor allergies, than to treat them for major disasters.

715 Lake Street
Medical Art Building

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The Germans came to King Christian X of Denmark to demand that something should be done about the "Jewish problem" (the country has only a few thousand Jews).

"Sirs," the King is reported to have said, "as we have never considered ourselves inferior to the Jews, we have no such problem here."

Sixty thousand Americans, most of them young, die each year of tuberculosis. Compared with the loss of life from this cause a century ago, it is a triumph that there are only 60,000. Compared with the number who could be saved by the prompt application of modern knowledge, it shows gross neglect that there are so many. Surgeon General Thomas Paran, Survey-Graphic, March, 1942.

CHEMOTHERAPY: THE SULFONAMIDES

RICHARD F. HERNDON, M.D.
SPRINGFIELD

Today a discussion of chemotherapy means a discussion of the sulfonamides. These compounds owe their effectiveness to direct bacteriostasis. They weaken the bacterial cells and slow their rate of growth. Perhaps a few organisms may pine away and die as a result of this action, but for practical purposes all of them are ultimately destroyed by the normal defense mechanisms of the body. It is extremely important to appreciate this fact because it explains in part why chemotherapy sometimes fails and why specific antibodies should always be administered when they are available and when prompt and continued improvement does not occur from chemotherapy alone. It also explains why the drugs should be continued for some time after the evidences of active infection subside, because if they are stopped before the natural defense mechanisms have had a chance to mobilize and gain the upper hand, a reinvasion by the bacteria is almost certain to occur.

There is one primary physical requisite for satisfactory results and that is an adequate local circulation. As any infectious process progresses the resulting inflammatory congestion slows the circulation. Therefore early therapy is important. For example, erysipelas almost always responds nicely but it is illogical to expect much benefit late in pneumonia when there is a completely consolidated, almost bloodless lung. For the same reason relatively bloodless regions, such as the bones, require very careful and prolonged therapy. Finally tissue necrosis, exudates, pockets or blind cavities interfere with the action of these chemicals and should be promptly drained. In other words any focal infection that is amenable to surgery should be eradicated.

Good results, naturally, depend primarily upon obtaining an adequate concentration of these drugs in the blood and body tissues as soon as possible. For severe infections experience has shown that this is ordinarily about 10 mg. per cent. To accomplish this the initial and subsequent daily maintenance dose should be about 0.1 of a gram per kilogram of body weight or approximately ¾ of a grain per pound. Children usually require slightly larger doses, 1 to 1½ grains per pound, because their elimination is more rapid. The maintenance dose should be divided into six parts and given every four hours. For less severe infections slightly lower concentrations, say 4 or 5 mg. per cent, are usually adequate. However no dogmatic schedule of dosage will always insure the desired blood levels because of variations in absorption and excretion. The only safe method of dosage is one controlled by frequent determinations of the actual blood level.

When these drugs cannot be given or retained by mouth they may be given subcutaneously or intravenously. Sulfanilamide may be given subcutaneously as a 1% solution in water or normal salt. It should not be given intravenously. For parenteral administration of the other drugs their sodium salt is used. For subcutaneous injection the strength of these solutions should not be much greater than 0.5 per cent and because they are distinctly on the alkaline side, they should not be given much faster than 250 cc. an hour in order to avoid local reactions. For intravenous injection a 5% solution is proper. Naturally the strength of these solutions may be reduced if more parenteral fluid is desired.

All patients whose condition requires or justified therapy with these drugs merit and should expect some special attention. Only in this way will optimal benefits be obtained and the occasional catastrophic results of severe toxic reactions be avoided. Naturally the necessary measures vary a good deal depending chiefly upon the quantity of the drug given and the condition of the patient. They may be briefly summarized as follows.

1. Inquiry about sensitivity. Although sensitivity is uncommon it does occur and with the almost universal use of these compounds more and more individuals are going to be encountered who have become sensitive. The most common manifestations are, of course, dermatitis and fever. They all require discontinuance of the drug. Although occasionally this sensitivity is transcient or limited to only one compound it is almost always permanent and general for the whole group. In such cases subsequent admin-

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istration will cause immediate and violent reactions. Therefore, every patient should be questioned before giving him the drug as to whether he has ever taken any of these compounds before and if so whether he has suffered any reaction. In case there is any doubt about the situation, it is best to administer only a few grains and observe the patient carefully for twelve to twenty-four hours before continuing.

2. Bacteriological examination or material for examination. Since the sulfonamides have a considerable degree of specificity in their antibacterial action the first requisite for their use is precise bacteriologic data and these examinations, particularly cultures and biological tests, such as pneumococcus typing, are often very unsatisfactory after treatment has been started.

3. Close observation. Hospitalization is desirable with a minimum requirement of daily observation or reports.

4. Laboratory checks. These include blood counts, urinalyses, fluid balance determinations and blood levels. The importance of laboratory checks cannot be over emphasized. However lack of facilities for these observations is not a contraindication to administering the drugs. Perrin Long has said that no significant drop in the white blood cells has been reported until these compounds have been given for at least ten days. As a minimum I would say that we should be sure that the twenty-four hour urinary output is at least 1000 cc. and that the urine should be observed daily for gross blood.

The sulfonamide drugs are still too new and there are still too many points of contraversy concerning their use for anybody to be expected to give a final answer at this time. Nevertheless I would like to say a few words in regard to each of the compounds now in general use.

Sulfanilamide is still a very useful drug because with it it is fairly easy to maintain constant blood and urine levels. It is indicated in streptococcus infections, meningococcus bacteremia, gonococcus bacteremia, Welch bacillus infections, trachoma, and chancroid.

Sulfapyridine has lost a good deal of its popularity because it is so insoluble, because it produces so much nausea and vomiting, and because it is so irregularly absorbed that it is difficult to attain and maintain adequate blood concentrations. Furthermore, it is very highly acetylated, 60 to 75% in some persons, and as you know the acetylated form is without bacteriostatic properties. To get blood levels around 5 mg% you have to use the sodium salt and, after the initial dose, give 2 grams every 4 hours. In fact, I think that whenever you prescribe sulfapyridine you should prescribe the sodium salt. To get blood levels above 5 mg% you usually have to resort to parenteral administration. Sulfapyridine is indicated in meningitis (except streptococcic), pneumococcus otitis, mastoiditis, and peritonitis, and influenza bacillus infections.

Sulfathiazole is a very valuable drug which seldom upsets the patient. However it is quite insoluble and is very rapidly eliminated by the kidneys, in fact so rapidly that it is very difficult to maintain elevated blood concentrations. Under the ordinary methods of administration one seldom sees a blood concentration much above 2 mg%. Therefore, if you have a patient desperately sick with pneumonia or a staphylococcus septicemia you should use the sodium salt, give one and one-half times the calculated dose and repeat it oftener, and if you desire blood levels much above 5 mg% you should start with parenteral injections. One of the great drawbacks to both sulfathiazole and sulfapyridine is the danger of renal block by precipitated crystals and this danger is of course much greater when we attempt to maintain high blood levels. Sulfathiazole is indicated in pneumococcus pneumonia, staphyloccus infections (except meningitis), gonococcus infections and urinary tract infections (except streptococcus).

If present indications are substantiated sulfadiazine will undoubtedly become the sulfonamide of choice. It is not only the least toxic of the group but is so readily and uniformly absorbed and so slowly excreted, that higher blood concentrations are reached and maintained than with any of the other compounds. Furthermore excretion is a little slower than absorption so that if the same doses are continued there is a gradual tendency for the blood concentration to rise. Finally there is very little acetylation even when high blood levels are maintained for several days and what acetylated form develops is more readily soluble than the original drug. It is indicated in all infections for which the sulfonamide compounds are effective.

PERFORATING GUNSHOT AND STAB WOUNDS OF THE CHEST

ANDREW J. TOMAN, B.S., M.D.
House of Correction
CHICAGO

From a period beginning January 1, 1931, to December 31, 1941 inclusive, 424 cases suffering from perforating gunshot and stab wounds of the chest were treated at the House of Correction Emergency Hospital, Chicago. 323 cases were due to gunshots, and 101 were due to perforating stab wounds. In this period, a total of 63 cases died, giving a mortality of 14.8%. This included all deaths with concomitant abdominal pathology, gunshot skull fractures and comminuted fractures of the thoracic vertebra with complete spinal cord severance. The total number of deaths from perforating stab and gunshot wounds of the chest per se was 25 or 5.9%.

Post-mortem showed that these cases died from perforating lacerations of the lung with massive hemothorax or perforating lacerations of the heart and its great blood vessels. 40 cases of the total 63 cases that died presented hemothorax on necropsy.

Of the total 63 cases that died, 30 cases had associated abdominal pathology, 6 cases had chest injury with comminuted fractures of the thoracic vertebra with spinal cord severance, and 2 cases had chest injury with gunshot skull fractures. The 30 cases that died of perforating chest wounds, associated abdominal pathology presented such post-mortem findings as perforating lacerations of the diaphragm, liver, stomach, small and large intestine, spleen, kidneys and adrenals. 20 of these cases were submitted to surgery and succumbed 7½ hours to 3 days after admission.

We have ascertained in our series of cases, that perforating lacerations of the lung, associated with perforations of the abdominal viscera, usually carry a high mortality in spite of surgery. The remaining 10 cases that died of chest injury, associated with abdominal pathology, expired in 10 minutes to 5½ hours after admission. The principal causes of death were primarily due to shock and hemorrhage, change in intra-pleural pressure or massive hemothorax and associated abdominal pathology.

Stephens and Cohn[1] state that hemorrhage, alterations in intra-pleural pressure and infections are the main causes of death in penetrating wounds of the chest. In our series of cases, we have encountered only one death due to infection; this being due to a stab wound of the lower right posterior chest, perforating the liver, resulting in a subphrenic abscess and rupturing through the diaphragm into the right pleural cavity.

54 cases that died had perforating gunshot wounds of the chest; 19 of these cases had through and through perforations. In 35 cases the bullet entered the pleural cavity, but presented no exit. We are of the opinion that gunshot wounds of the chest, having an entrance with no exit, carry a higher mortality than through and through gunshots because a bullet which has no exit produces multiple ricochets against the bony thoracic cage causing multiple lacerations of the lung, and frequently perforating through the diaphragm into the peritoneal cavity. This was a common post-mortem finding and demonstrates the fact that this type of wound is multiple and complicated rather than a clear through and through injury.

14 cases out of the 54 gunshots of the chest that died had multiple entrances and exits. Of the total number of 63 deaths, 9 cases were due to perforating stab wounds of the chest.

It is interesting to note that in this series of cases, the number of left anterior chest perforations totaled 164, while right anterior perforations totaled 107. In comparison, the right posterior chest perforations totaled 88 and the left posterior perforations totaled 65. This phenomena can be explained by the position of the victim and the right-handedness of the assailant.

A great emphasis has been placed by other writers on the symptoms present on the first examination of the injured individual.

Connors and Stenbuck[2] reported in a series of 109 cases, the infrequency of hemoptysis as a presenting symptom. Hemoptysis was only seen twice in their series of cases. In our study, however, hemoptysis was present in 192 cases, or 45%.

McGuire[3] states that hemothorax appears as a late physical finding, usually becoming evident on the third day after the injury. In our

series of 424 cases, hemothorax was evident immediately on admission or within two hours following; in other words, 215 or 51% presented hemothorax.

The condition on entrance of these patients varied. Of the 424 total admissions in this 10 year study, 254 cases were admitted on stretcher; the remaining 170 were ambulatory. 141 patients, or 33%, showed signs of shock and hemorrhage.

TABLE I

GENERAL SURVEY OF PERFORATING GUNSHOT AND STAB WOUNDS OF THE CHEST

424 Total Number of Cases Admitted from January 1, 1931, to December 31, 1941, inclusive

	Number of Cases	Percent
Gunshot Wounds	323	76%
Stab Wounds	101	24%
Ambulatory Cases	170	40%
Stretcher Cases	254	60%
Left Anterior Chest Stab and Gunshot Wounds	164	39%
Right Anterior	107	25%
Left Posterior	65	15%
Right Posterior	88	21%
Through and Through Gunshot Wounds of the Chest	168	52%
Gunshot Wounds of Chest with No Exit	155	48%
Multiple Gunshot Perforations of the Chest	36	11%
Shock and Hemorrhage	141	33%
Hemoptysis	192	45%
Hemathorax	215	51%
Subcutaneous Emphysema	56	11%
Reflex Rigidity	112	26%
Total Deaths	63	14.8%
Deaths due to Chest Wounds per se	25	5.9%

One problem on entrance was the presence or absence of coexistent abdominal pathology. Abdominal rigidity was noted in 112 cases, or 26%.

Abdominal rigidity was noted more frequently in perforating gunshot wounds of the chest with no exits and perforating stab wounds. The question arose as to whether this rigidity was of reflex origin or indicative of perforation of abdominal viscera. By placing the patient on a back-rest with relaxation of the abdominal musculature, the rigidity disappeared within one-half to 2 hours in purely chest cases, while it persisted in those cases with coexistent abdominal pathology.

In all cases, an increase in temperature was noted on the day following admittance. In cases uncomplicated by hemothorax, the temperature varied from 99 to 100 degrees falling to normal on the third day. In those cases having hemothorax, the temperature rose to 102-103 degrees, remaining elevated until the 6-7 day, despite the oral and intravenous fluid intake. This phenomena is probably analogous to the slight pyrexia following auto-hemotherapy.

Hospitalized patients presented numerous variations in the type of complications. The most common complications were fracture of the adjacent ribs, hematomas at the site of entrance of the missle, concomitant abdominal pathology with perforated abdominal viscera, skull fractures, comminuted fractures of the thoracic vertebra with complete spinal cord severance, while brachial nerve injury and superficial wound infections were seen in other cases.

Among the more frequent complications was subcutaneous emphysema of the area surrounding the entrance of the missle. Subcutaneous emphysema was seen in 56 cases, or 11%.

In our series of 424 cases, subcutaneous emphysema was seen much more frequently in perforating chest injuries due to blunt instruments, such as stab wounds and frequently in gunshot wounds having no exit.

It is interesting to note the slight incidence of intra-thoracic infection when one considers the bacterial contamination carried in from the missle itself and through the contaminated clothes and skin. Two cases of the 424 admitted, developed infected hemothorax. These two cases of infected hemothorax developed after thoracentesis had been performed prior to admission to our hospital. Three cases out of the 424 total admissions developed superficial skin abscesses at the site of entrance of the missle. In this series of cases, we observed no pneumonia, lung abscess or gangrene of the lung; such complications we believe, occur more often with wounds caused by grenade or shrapnel fragments.

Post-mortem examinations were performed on the 63 cases that died. Autopsy findings were significant in the study of the actual cause of death. Shock and hemorrhage and laceration of the lung with massive hemothorax and laceration of the heart and its great vessels was responsible for 25 deaths; two cases died as the result of gunshot skull fractures with laceration of the brain substance and hemorrhage. The chest injuries in these two cases could be considered of secondary importance. Six cases died from chest

injury associated with comminuted fracture of the thoracic vertebra with complete spinal cord severance. Thirty cases out of the 424 admissions died from chest injury associated with abdominal pathology.

Conservatism is essential in the treatment of perforating wounds of the chest. After careful examination of the patient and administration of 1500 units of tetanus antitoxin, the patient is placed on a back-rest or in Fowler's position, depending upon which position the patient is found to be the most comfortable.

Shock and hemorrhage is combatted immediately by application of external heat and administration of normal saline with glucose intravenously. Fluids are pushed by mouth in the absence of abdominal pathology. Recently we have attempted to use suprarenal cortical hormone and blood plasma to combat shock and hemorrhage, but the number of cases has been insufficient to arrive at any definite conclusion as to its superiority of its treatment over the old ones. Blood transfusion has never been used at any time.

TABLE II

MORTALITY ANALYSIS OF PERFORATING WOUNDS OF THE CHEST

Total Number of deaths due to gunshot and stab wounds	63
*Deaths due to gunshot wounds	54
1) Through and through wounds	19
2) Entrance and no exit	35
Deaths due to stab wounds	9
Deaths due to gunshot and stab wounds per se	25
Deaths due to chest wounds with associated abdominal pathology	30
Deaths due to chest wounds with associated comminuted fracture of thoracic vertebra and spinal cord severance	6
Deaths due to chest wounds with associated gunshot skull fracture	2
Deaths due to chest wounds presenting hemothorax on necropsy	40

*14 Cases out of the 54 gunshot cases presented multiple perforations of the chest.

Strict asepsis in local treatment of the chest-wounds is essential. No probing of the wound is attempted at any time. Wounds are cleansed thoroughly with greensoap, peroxide and antiseptic solutions such as tincture Merthiolate or Mercurochrome, are applied to the wounds and covered with sterile dressings. Occasionally we have strapped the injured side of the chest with adhesive tape so as to limit the respiratory movements. Sucking type perforations were closed immediately by suturing with cat gut and dermal sutures or packing. Bullets were removed only when lying accessible in the subcutaneous tissues and then only when the patient was well on the road to recovery.

Rest is essential. Morphine sulphate grains ¼ is given hypodermically every 6 to 12 hours to its physiological effect and restlessness, cough, dyspnea and anxiety will soon subside.

Administration of hemostatics is next considered. Ice bags are placed over the injured area. In the absence of abdominal pathology, Calcium lactate or Dicalcium phosphate grains xxx is given orally four times daily. 10% Calcium gluconate 10 cc is given intravenously daily until hemoptysis subsides. All cases that presented signs of shock and hemorrhage are given Coagulen (Ciba) 1 cc intramuscularly every 4 hours until the pulse becomes full, strong and regular and between 80 to 90.

After Morphine becomes no longer necessary, cough and dyspnea is controlled by the administration of codeine sulphate, one grain three times daily.

We have performed no thoracentesis at any time, believing that the blood in the pleural cavity acts as a splint in the injured lung, thus preventing further hemorrhage and keeping the lung at rest. Blood is the best culture for pathogenic bacteria and repeated thoracentesis, no matter how aseptic the technique affords a possible mode of infection by these bacteria. We reiterate that despite the contamination brought in by the penetrating missle or object, we have never found any infected hemothorax per se.

SUMMARY

1. Left anterior chest wounds and right posterior chest wounds are more numerous, due to the position of the victim and the right-handedness of the assailant.
2. Multiple perforations and perforations with no exits carry a greater mortality than through and through perforations.
3. Hemoptysis is a common symptom being found in 45% of our cases.
4. Hemothorax develops immediately or within a few hours after entrance.
5. Chest wounds without accompanying abdominal pathology are in themselves rarely fatal. If patient lives thirty-six hours after injury the ultimate prognosis is favorable.

6. We contribute our low mortality and absence of secondary complications to the use of conservative treatment.

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THE PUBLIC HEALTH IN WAR TIME

Past Assistant Surgeon Henry A. Holle
U. S. Public Health Service

This is War — all our peace time pursuits are of secondary importance except in so far as they are directly connected with the war effort. This is true of all industrial and professional fields in which either materials or skills are concerned. It is no less true in the field of medicine and public health. It is our job as physicians to meet the medical needs, not only of the armed forces, but also of the population at home so that we as a nation might be strong and so that a successful outcome of this war might be assured.

This is Total War — and, as such, it calls for the greatest effort, in the shortest time, which has ever been attempted not only in this country but in any nation in the world's history. The tremendous medical and public health problems which present themselves in this war can only be solved successfully by complete cooperation and by a careful distribution or rationing of the professional services which are available to do the job. We cannot afford needless duplication of services, because we don't have the services to spare.

I should like to discuss with you briefly a few of the health problems which have arisen as a result of the all-out war effort, or which existed previously but which now require attention on account of their importance in the program of all-out production. I should like to mention briefly the responsibilities of official health agencies and of the medical profession in meeting such problems in view of increasing difficulties in connection with the increasing depletion of medical and public health personnel.

The establishment of military concentrations as well as the construction of large war production plants have resulted in population shifts of quite some proportions and have created in connection with these population shifts important public health problems which have to be dealt with on short notice. Towns have grown into cities almost over night — populations of a thousand or less have been increased within a few weeks or months to many thousands. The complete absence of public water supplies — of sewage disposal facilities — and of the sanitary regulation of food supplies has made it mandatory that these needs be met in order to protect the population from serious outbreaks of food-borne or water-borne diseases.

On the other hand, the establishment of safe water supplies requires labor and materials which are also needed in making tanks, ships, and guns. We must use judgment, therefore, in the construction of necessary community sanitary facilities such as sewage treatment plants in order that critical war materials might not be utilized except in instances where no other alternative remains. In the case of sewage, it might be necessary for us to tolerate a continued pollution of our streams, up to a certain point, as a necessary evil during the war emergency because it is not wise that we should provide modern facilities in connection with a need which might be met by other means than added construction.

Influxes of population in military or production areas have increased housing problems which should be met in some way to prevent overcrowding. The necessity for the conservation of critical materials, however, again makes it necessary that judgment be exercised in the construction of additional housing facilities.

The mushroom growth of communities as described above has created acute problems in connection with the regulation of food dispensing establishments in critical areas. In many localities local health departments were weak or non-existent. Uncertainty in regard to political jurisdictions confused the issue further, so that for a time no clear-cut regulation of newly established food dispensing establishments was readily available in many areas. It became nec-

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essary for the respective State health departments to assume the responsibility for setting up temporary sanitary safeguards until local health services could be organized in such areas.

The Community Facilities Bill was designed to provide for the construction of public water supplies, sewage treatment plants, schools, and hospital facilities, the need for which was created by the war emergency. Many of these projects were approved and construction was scheduled. At this time, however, it becomes necessary for the War Production Board to again review the approved, proposed construction projects with a view towards a conservation of vital materials and it now appears that the lowly sanitary privy might have to be utilized more than we previously imagined would be necessary, during the present emergency on account of the scarcity of materials for the construction of adequate sewerage or sewage treatment facilities.

Although there is evidence to show that the sulfonamides are an effective chemotherapeutic agent in tuberculosis in animals, the effect in human tuberculosis has not been encouraging. Some authorities believe this is a result of poor nutrition. However, provisional figures for the State of Illinois show that there has also been an increase in pulmonary tuberculosis here recently. During the year 1941, more than 8,000 tuberculosis cases were reported in this State, as compared with approximately 7,000 during the year 1939-40.

There is some evidence to show that the attack on tuberculosis through chemotherapy might yield fruitful results heretofore not achieved. Animal experiments indicate that one of the sulfonamides might well prove to be a boon in the therapeutic approach to tuberculosis. At the present time, one of the most acute public health needs of this State is the provision for additional hospital beds for tuberculosis cases. These beds can be provided most economically on a statewide basis. At the present time, there are certain areas in Illinois where beds are not now available for tuberculosis patients. As long as it is necessary to keep the open tuberculosis patient in the home, we may expect transmission of the disease to many of his susceptible contacts.

Other preventable communicable diseases such as diphtheria and smallpox still occur in this country, in spite of the availability of effective control measures through immunization. In this connection, it is the duty of every practicing physician as part of his public halth job to make sure that every child who comes under his care is immunized against diphtheria and smallpox. If this were done by the practicing physician, it would not be necessary for the departments of health to conduct immunization campaigns in order to get enough people immunized to prevent an epidemic. Approximately 1,000 cases of diphtheria were reported in Illinois in 1941.

The venereal diseases continue to be a problem as the cause of disability in the armed forces and in defense industries. The control of this problem, however, has gotten off to a good start. State and local departments of health, for the most part, are alert to the problem and are far better equipped than ever before to deal with it. The Congress has made available, through the Public Health Service, under the provisions of the venereal Disease Control Act, considerable funds for venereal disease control. These funds, together with those which were appropriated on State and local levels, have improved diagnostic and treatment facilities in all States. Infected individuals are being brought under treatment more promptly, thus preventing the infection of many others. Sexual contacts of infected persons are being found, examined, and brought under treatment, if found infected. Here, again, the private physician has a public health duty to perform. I believe that if the physician who makes a diagnosis of venereal disease has the confidence of his patient he is in a much better position than the most highly trained investigator to influence such patient to want to bring the source of his infection under treatment. If such is not the case, a good selling job has not been done by the doctor on the public health implications of syphilis or gonorrhea. Fortunately, our treatment methods have been greatly improved. The treatment period of gonorrhea has been tremendously shortened and in syphilis a limited experience leads us to believe that the same will be true.

While malaria has not presented itself in large outbreaks, the potentialities are to be reckoned with. Especially is this true where large

numbers of troops are moved from a malarious area to one in which the disease may not be prevalent at the moment, but where anophalene mosquitoes are known to exist. The Public Health Service has been authorized to engage in a comprehensive malaria control program which is just getting under way in certain areas.

Industrial production for our war effort is of paramount importance. Consequently, the health of the industrial worker assumes added significance at this time. A recent analysis of industrial hygiene activities in State and local health departments was recently made. There are approximately twenty-nine and one-half million industrial workers in twenty-five States. About half of these are engaged in industries with potential health hazards. Less than two million of these are reached through industrial hygiene services designed to remove hazardous working conditions. It was concluded that at least half the employees' are working under conditions that need correction or improvement. The Chief of the Division of Industrial Hygiene in the National Institute of Health recently pointed out that in 1940 about seven million days were lost from work because of strikes; in the same year, approximately 350,000,000 days were lost because of disability.

Important advances through research in chemical engineering and in clinical fields have made possible the elimination of many specific occupational hazards. This knowledge has not been effectively applied to a large proportion of industrial workers. As is true in many other fields of medicine, there is a large gap between what is known and what is done.

The need for hospital facilities in many critical areas has become acute and inasmuch as hospitalization for production workers is a vital necessity, provision has been made through the Community Facilities Bill or the Lanham Act for the construction of additional hospital beds. This construction was originally planned as additions to existing permanent institutions, but the shortage of critical building materials has made it necessary for the War Production Board to scrutinize carefully all hospital construction of a permanent nature. It is apparent that much of this construction of hospital facilities will of necessity be done on a temporary basis. The demand for hospital beds has increased tremendously on account of population influx resulting from increased employment due to the war effort, to the improved economic status of a large segment of our population, and to the organization of pre-payment hospitalization plans. The Public Health Service has been engaged in making hospital surveys in critical production and military areas and has made recommendations, in regard to the needs, to the Federal Works Agency, which is charged under the Lanham Act to administer the funds which have been made available for the construction of additional hospital facilities.

One of the most urgent problems which confront military and civilian authorities today is a shortage of physicians and nurses. The needs of the armed services must of necessity take priority over those of the civilian population. Col. George F. Lull, Chief of the Personnel Division, U. S. Army Medical Corps, stated several weeks ago that the Army will need approximately 24,000 physicians during 1942. It has been estimated that a rate of approximately six and one-half physicians will be needed for every thousand soldiers. If this is ultimately shown to be correct, from 40,000 to 60,000 medical men will be needed in the armed forces. When one considers that only from 165,000 to 180,000 physicians are available for the rendition of medical services it at once becomes apparent that most physicians under the age of forty-five will be needed purely for military services. It is evident that some kind of a distribution process will be necessary if the essential needs of the large civilian population group are to be met. The depletion of medical personnel is already evident. It will become more evident as time goes on. This is especially true in rural areas, many of which do not have any physicians whatsoever available. An exodus of young physicians from rural to urban areas has been observed for a number of years. As vacancies are created in cities as a result of military recruitment, this migration from rural areas will very likely continue, unless the Procurement and Assignment Service is able to effect a rational redistribution of physicians on a nation-wide basis. Whether or not this will be necessary remains to be seen.

In addition to a shortage which exists among practicing physicians, a shortage of other types of trained public health personnel is also being observed. There is an acute need for the organization of new county health departments, but personnel to man such departments is becoming scarcer. This is true not only of physicians, but of trained public health nurses, sanitary engineers, and sanitariums. The Public Health Service has attempted to alleviate this situation to a limited degree by placing on active duty within the several States some eight hundred public health workers to be utilized by the several States in critical military production areas.

Every county with a population of 30,000 or more should have a full-time county health department, under the administrative direction of a trained public health administrator. It should be the responsibility of this department to discharge the duties imposed upon it by law as the official health arm of the local government. It should receive assistance from the State health department through funds from State and federal sources and through consultation services from specially trained personnel in the State department of health. The county health department should be interested in all measures which will operate to improve the health of the people within that county. In so far as possible, it should be given administrative control of the expenditure of all tax funds for health purposes on the county level.

Needless duplication of services on all levels should be discontinued at least for the duration of the war and probably after the war. On the county level, the county health officer should coordinate in so far as possible the efforts of voluntary health agencies. He should work closely with the organized medical profession and with other professional groups in all matters which pertain to the public health. This is especially urgent at this time on account of the depletion of medical personnel which will reflect itself in increased public health and medical care needs including hospitalization.

At the present time, the State of Illinois does not have legislation permitting the establishment of county health departments in the usual manner. It is hoped that such legislation will be forthcoming at the next session of the State Legislature.

Authority has been granted, however, by the emergency session of the State General Assembly permitting the State Health Officer to designate certain areas as defense areas and to set up and operate public health services in such areas. Under this authority and through a cooperative arrangement with county governments, I am informed that three counties are now ready to begin a more concentrated type of local health services through full-time county health units.

The relationship between the U. S. Public Health Service and the Illinois State Health Department has been most cordial. Under the able administrative supervision of Dr. Roland R. Cross, the staff of the Department has been strengthened materially. We have every reason to believe that the future in regard to adequate public health services in Illinois is very bright.

In conclusion some thought should be given to the problems which will present themselves in the future. Large numbers of our military forces are being sent to the four corners of the earth. They will be exposed to a great variety of new diseases and environments and upon their return the possibility of preparing for such new diseases and new health problems should be considered.

I do not like hay fever
It makes me leak and cough,
I'd rather be a porker
And eat from out a trough;
And yet my hat I doff, sir,
Though mostly on and off
To any man past eighty
Who plays a game of golf.

Young people attending tuberculous patients must be very closely watched. Tuberculin-negative persons are especially in danger. Even the tuberculin-positive persons, if young, may have become positive only very recently and therefore are still not out of danger. All newly discovered X-ray lesions in young adults must be treated as potential phthisis — by a period of observation under rest. Edgar Mayer, M.D. and Israel Rappaport, M.D., Jour. of Med. Assn., Apr. 4, 1942.

THE PRESENT STATUS OF SHOCK THERAPY

S. N. Clark, M. D.
JACKSONVILLE

Many articles have been written on the subject of shock therapy. A mere reading of titles on the subject would fill more than the allotted time for this paper, although such papers have been appearing in this country only for about five years.

The purpose of this paper is to present a brief survey of the more practical aspects of shock therapy. There will not be time to attempt to reconcile reports which appear to be contradictory nor to dwell upon points of view which may prove of tremendous importance ultimately but which must wait for a longer view to prove their worth.

Probably one of the first questions to arise would relate to the benefit obtained from shock treatment. The applications of shock therapy are now numbered by the tens of thousands. Dr. Lawrence Kolb, Assistant Surgeon General of the U. S. Public Health Service is making a report of over 70,000 shock therapy cases based upon records from 260 hospitals. Some workers have ceased to give the treatment. Relapse may occur, not all cases respond favorably, and there are dangers. One may assume that one or more of the factors mentioned have discouraged some to the point at which they have discontinued shock therapy. Generally speaking the recent reports coincide with those of three or four years ago, that the treatments bring a social or complete remission in the great majority of cases of schizophrenia which have not been ill for more than six months. Results are somewhat less favorable in cases of longer duration. Remissions are infrequent in those who have been ill for more than two years, although they may show a more docile behavior.

During the past two or three years, most workers have come to feel that insulin is of more value in schizophrenia than convulsive therapy, whereas the latter is of more benefit in manic depressive psychosis of the depressed type, involutional melancholia and presenile depressions. Most do not believe the psychoneuroses are helped by shock therapy.

A mild hyperinsulinism has been recommended for acute alcoholism and the toxic condition of the chronic alcoholic but there may be some question whether this should be termed shock therapy.

Another question of immediate importance has to do with the dangers inherent in the treatment. A general statement may be made that all prospective cases should be in fairly good bodily condition. This view is expressed in different terms by different writers. One would hesitate to give treatment to the very weak, to those suffering from malignant disease, tuberculosis, or myocardial degeneration, and in conditions in which the spine had been weakened by disease. Yet the actual decision should always rest upon consideration of the individual factors. These have to do not merely with the general condition of the patient but also with the probability of improvement in the mental sphere under shock therapy as contrasted with the prognosis without treatment. The probability that shock treatment will shorten a psychosis has its economic, as well as social, importance.

There are particular hazards which have to be considered. The chief of these in insulin shock treatment is protracted coma. Ordinarily the administration of glucose brings the patient out of the coma in from 10 to 30 minutes with nasal feeding, and even more promptly if the glucose is given intravenously. If one delays beyond a certain point, a stage may be reached in which coma goes on for hours, or even a few days, despite glucose administration. Histopathological changes in the brain are said to occur in the protracted comas, and deaths as a result have been reported. On the other hand, many workers report that benefit in the psychoses does not occur unless the coma has been permitted to go on for about an hour. In this connection, the work of Frostig[1] is of particular interest. He enumerates a number of signs among which, in addition to deep coma, are pin point pupils, tonic extensor spasms and depression of all reflexes including those of lid and cornea, which indicate that the shock should be terminated. He believes that a protracted coma will occur only when these signs are not heeded and glucose withheld.

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Metrazol as a convulsive agent has been superceded to a large extent by the electric current. The latter is not associated with a sense of fear such as is found between the injection of metrazol and the convulsion caused by it. One does not have to find a vein which in some cases is a not inconsiderable problem. It is stated that fractures are less apt to occur with the electric shock than when metrazol is used. It is possible that the newer technic of firm mattress, hyperextension of dorsal spine by means of a pad or sand-bag, with restriction of the grosser movements, may be in part responsible for the more favorable results. After reports were received of fracture of the dorsal vertebrae occurring with convulsive shock treatment, various modes of preventing fracture were tried. Injections of Curare and similarly acting drugs cause temporary weakness of musculature and prevent the strong contractures which lead to fractures. Preliminary anaesthesia with Nitrous Oxide has been given with a similar purpose. These measures for altering the convulsion have there adherents, but no one is generally adopted. The majority seem to feel that hyperextension and restriction of movement make the treatment fairly safe.

Another hazard in convulsive therapy is the activation of a quiescent tuberculous lung. In a series of 297 cases, Read[2] found that 8.3% developed an active tuberculosis of the lung following a series of metrazol treatments. It is probable that having been warned of this danger, the percentage of activations can be decreased by a careful survey before and after treatment, general hygienic attention and supervision of the resumption of activity.

An important feature of the treatment with both insulin and convulsive therapy lies in the fact that the patient is more accessible immediately after the shock. It seems that the veil which ordinarily surrounds the patient is lifted for a little while, making possible a degree of rapport which before had been impossible. These periods of understanding increase in depth and in duration as time passes until the patient is in a remission.

It was implied in the fore part of this paper that all reports on shock therapy are not in accord. The only significance of this statement so far as this presentation is concerned, is to call attention to the fact that the ideas of various workers in this field are still in process of being shaken down.

One of the important questions which remains unanswered is that of the mechanism underlying improvement. One would not expect to find any simple answer to the problem of mental disorders but it may well be that further work along various lines suggested by shock treatment will bring a definite advance in our understanding of them. Any agent which causes symptoms to disappear, particularly in a condition as complex as that of a psychosis, must shed light on such conditions if we have the wisdom to interpret that light. It is not too much to hope that study of the problems presented by shock therapy will ultimately help us to reach the point at which we can not only treat the psychoses but perhaps prevent them.

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GALL BLADDER DISEASE

With Special Reference to Alterations in the Anatomy and Physiology of the Gall Bladder

MANUEL E. LICHTENSTEIN, M. D.
CHICAGO

"Gall Bladder Disease" refers to that symptom complex usually associated with distress in the right upper quadrant of the abdomen. In some instances the symptoms are very pronounced while the physical findings are indefinite or absent; in others the physical findings may be very definite although the symptoms are mild and of short duration or referable to some other organ. Such discrepancies between symptoms and physical findings are due to variations in the intensity and character of the disease in the gall bladder itself and to the extent of derangement in the anatomy and physiology of the organs adjacent to or associated with it. An analysis of gall bladder disease is inadequate unless consideration is given to the alterations that may be present in the liver and the organs

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physiologically concerned with its activities, the pancreas, stomach, duodenum, colon, appendix and at times the thoracic viscera.

The present discussion is primarily concerned with the anatomy and physiology of the gall bladder and the pathologic changes that result in or are related to disease of this organ. The functions of the gall bladder are absorption, secretion and motor activity. Unlike the normal appendix, the gall bladder free from disease cannot be removed without producing anatomic, physiologic and at times, pathologic changes in the adjacent viscera.

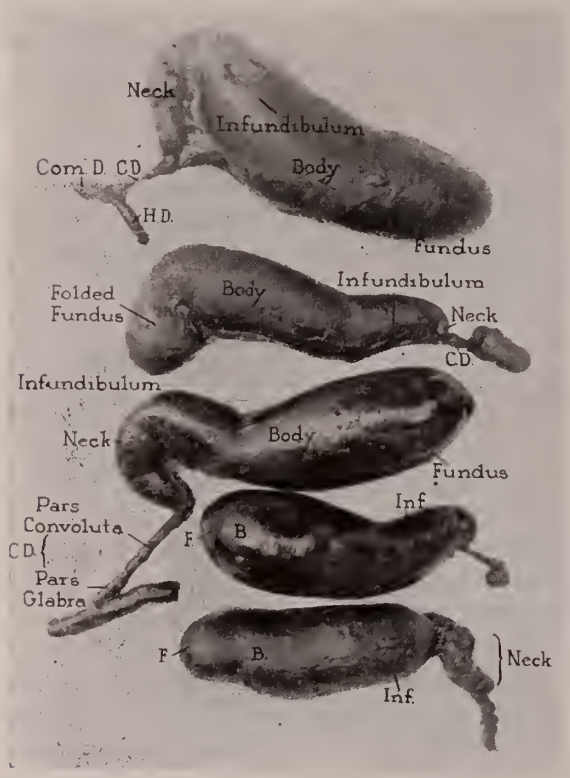


Figure 1. Variations of shape and size in the gall bladder.

Anatomy. The gall bladder is a part of the extra hepatic biliary system. It varies in size, shape, contour and capacity (Figure 1). The fundus frequently is completely covered with visceral peritoneum and usually lies in contact with the parietal peritoneum over a small area. This area is significant in the physical examination of the patient with acute gall bladder disease, because this local point of acute tenderness may be diagnostic. The body of the organ varies in capacity and tapers into a funnel shaped portion called the infundibulum. This constricted area is frequently the site of the lodgement of large stones. The neck is defined as that portion which extends from the first "valve of Heister" to the cystic duct. This portion of the gall bladder is usually kinked and frequently is the site of obstruction. The cystic duct varies in size. In a recent study (Figure 1) 55 per cent were found to be between 2 and 4 cm. long, 20 per cent were less than 2 cm. in length while 25 per cent measured more than 4 cm. The calibre of the cystic duct varies, but its circumference which is smaller than that of the hepatic or common bile duct, is approximately 6 mm. This small calibre of the cystic duct is of significance, since many accidents in gall bladder surgery occur about the cystic duct at its site of contact or union with the hepatic duct. Careful examination to determine anatomical relations should always be carried out and it may be assumed that a "large duct" in this region is most probably not the cystic duct. Within the lumen of the cystic duct there are a variable number of projections arranged in a spiral known as the "Valves of Heister." (Figure 2). These are found throughout the length of short cystic ducts, but may be absent in the distal portion of long ducts. It is this distal portion free from "valves" which dilates following cholecystectomy and is sometimes erroneously referred to as "regeneration of the gall bladder." The function of the "valves of Heister" is not known, but they appear to be an architectural device for the prevention of sudden distention of the duct when variations in pressure occur in the gall bladder or in the common duct. Their presence decreases the calibre of the cystic duct and impedes the flow when thick bile is expelled from the gall bladder. Their delicate structure makes them subject to inflammatory changes, either chemical, bacterial or allergic. These changes result in further narrowing of the lumen of the duct and serve as the basis for more extensive changes in the gall bladder proper. Redundancy of these folds and kinks in the duct also may be responsible for obstruction to the free flow of bile into or out from the gall bladder. In addition, obstruction may be produced by small stones lodged in the cystic duct. The

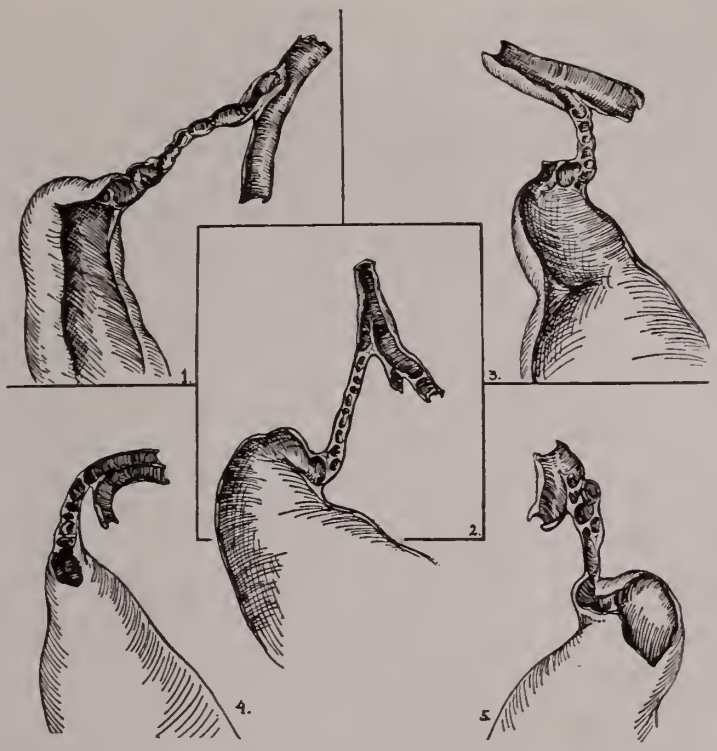


Figure 2. The "Valves of Heister."

small cup shaped areas formed by the valves may act as pits in which gall bladder debris may accumulate, become impacted and form stones. Thus the cystic duct because of its size and anatomical structure is a vulnerable site for the inception of more extensive disease in the gall bladder. From the point of view of prevention of gall bladder disease it would appear that a dilute freely flowing bile is least likely to cause the disturbances usually associated with the changes following cystic duct obstruction.

The left and right hepatic ducts unite to form a common hepatic duct. This and the cystic duct become continuous as the common bile duct. The latter varies in length depending on the length of the cystic duct. Walters found that in two-thirds of a group of cases the head of the pancreas surrounded the common duct; in the remaining one-third the duct lay behind the pancreas. The significance of biliary tract obstruction associated with enlargement of the head of the pancreas is obvious.

In many instances the common duct unites with the pancreatic duct before opening into the duodenum. This common pathway for bile and pancreatic juice may be a source of chemical disturbances that will determine not only pancreatic disease but gall bladder disease as well. Wolfer indicated the possible cause of gall bladder disease due to pancreatic juice reflux. The alkaline pancreatic juice in a gall bladder that has bile acids may result in chemical changes leading to precipitation of gall bladder contents.

The fact that the common duct passes through the muscular wall of the duodenum may also give rise to functional disturbances, for contractions of the duodenum may interfere with the passage of bile through the common duct. The distal end of the common duct is surrounded by a circular muscle bundle, the sphincter of Oddi. This muscle is of importance for it regulates to a considerable extent the filling and emptying of the gall bladder. When the sphincter is incompetent the gall bladder does not fill. Cholecystectomy frequently results in a relaxation (paresis) of the sphincter.

Physiology. Bile secreted by the liver passes through the common duct into the duodenum under a pressure of 3 to 10 cm. When the sphincter of Oddi is closed, bile meets this barrier and passes into the gall bladder. The anatomic

capacity of the gall bladder varies, but may accommodate from 30 to 90 c.c. The liver produces approximately 1000 c.c. of bile daily. The need for bile in the intestinal canal is not continuous and its storage in the gall bladder prevents the waste of this material in the inter-digestive period.

The physiologic capacity of the gall bladder varies from 2 to 10 times greater than its anatomic capacity. This is due to the concentrating ability of the gall bladder. With the absorption of water, the total solids may be concentrated to 20 per cent of the total volume of gall bladder bile. A dilute hepatic bile may be concentrated as much as 10 times, but a more concentrated hepatic bile undergoes lesser concentration. In addition to the absorption of water, sufficient salts are absorbed to render the gall bladder bile iso-osmotic with hepatic bile. This prevents changes in the mucous membrane that may be caused by a hypertonic solution. Bicarbonate is also absorbed. This renders gall bladder bile acid, and the bile salts present in hepatic bile are converted into bile acids.

The bile salts are the most important constituent of bile. In the intestinal canal they not only assist in the emulsification of fats so as to facilitate their digestion but also aid in the process of absorption of fats. Absorption of the fat soluble vitamins, A, D, E, and K is dependent on the presence of bile salts in the intestinal canal. In the presence of liver disease there is a reduction in the formation of bile salts. This interferes considerably with the absorption of fats. In the gall bladder the bile acids keep in solution cholesterol and other fats. A diminished quantity of bile acids here will result in precipitation of cholesterol. A high concentration of cholesterol in the presence of a normal bile acid concentration may also result in the precipitation of cholesterol. It was noted previously that obstruction may occur readily in the narrow cystic duct. The advantages of a dilute bile with sufficient bile acids and frequent evacuation of the gall bladder in order to avoid stagnation and excessive concentration are obvious.

Evacuation of the gall bladder is brought about by the contraction of the musculature of this organ and the relaxation of the sphincter of Oddi. The specific substance which initiates and maintains the contraction of the gall bladder is a hormone — cholecystokinin. This substance has been extracted from the duodenal mucosa in pure form by Ivy. When injected intravenously it neither affects the blood pressure nor stimulates gastric, pancreatic or intestinal secretion. This substance under normal circumstances is liberated in large amounts when fatty foods pass into the duodenum. The Graham-Cole method of the study of the gall bladder has made use of this prompt response of the gall bladder to the entrance of fatty foods into the duodenum.

Proteins have no direct effect on the evacuation of the gall bladder. However, they stimulate a prompt flow of acid gastric juice and the passage of a large amount of this juice into the duodenum results in the contraction of the gall bladder. Carbohydrates have no affect on the contraction of the gall bladder. It can be seen that of the three basic food substances, fats stimulate contraction of the gall bladder most readily, proteins to a variable extent, and carbohydrates not at all.

The importance of diet in gall bladder disease is considerable. In the presence of acute inflammation when rest for the organ is sought, a non-stimulating carbohydrate diet is most appropriate. The stagnation of bile in the normal or sluggish gall bladder can be obviated by the use of fat in the diet. This must be kept in mind in the case of obese individuals who have restricted their fat intake in an effort to lose weight. In pregnancy the gall bladder does not evacuate its contents well. The cause of this is not known, but stagnation of bile may readily result in precipitation of cholesterol with the formation of cholesterol stones. Individuals on a reduced diet and pregnant women must be given enough fat to stimulate contraction of the gall bladder. Some fats such as those found in egg yolk and cream are rich in cholesterol base. To avoid an increase in cholesterol it may be more desirable to use olive oil in the diet, since this substance does not form cholesterol.

Bile salts are formed in the liver from amino acids. Where there is a decrease in hepatic function or a reduction in protein dietary income, it may be necessary to supplement the inadequate quantity of hepatic bile salts and to increase the secretion of bile by the liver with oral administration of bile. Oxidized bile salts increase the quantity of bile output — hydrocholeresis — without increasing the concentration of bile salts.

Conjugated bile salts increase the flow of bile salts from the liver.

The maximum pressure that can be developed by the contraction of the gall bladder is approximately 25 cm. of bile pressure. Under ordinary circumstances this pressure does not develop in the gall bladder because of the relaxation of the sphincter of Oddi and the free passage of bile into the duodenum. The secretory pressure of the liver is approximately 30 cm. of bile pressure. In view of these pressure relations it is unlikely that a maximal contraction of the gall bladder could result in forcing bile into the liver sufficiently to suppress liver secretion.

When obstruction in the duct system is present, however, an increase in pressure of more than 10 cm. causes distention of the duct proximal to the obstruction. This may be associated with the development of pain. It appears that the cause of pain in noninflammatory gall bladder disease is distention in the organ or the related ducts due to spasm, stricture or calculous occlusion.

Duodenitis may also be the cause of pain in the biliary system. Contraction of the gall bladder and relaxation of the sphincter of Oddi usually occur simultaneously, but a spasm of the duodenal musculature will prevent the passage of bile into the duodenum. In many instances it is difficult to distinguish between disease of the gall bladder and disease of the duodenum. This is due to the intimate relation of the common duct, duodenum and sphincter of Oddi. Inflammatory changes in the duodenum which may precede or co-exist with duodenal ulcer may be associated with changes in the gall bladder and bile passage. In such cases correction of the duodenal disease may relieve the patient of the gall bladder disturbance.

Spasms of the sphincter of Oddi may produce a similar disturbance. These may be relieved by anti-spasmodic drugs such as amyl nitrite or glyceryl trinitrate which produce prompt relaxation. In the chronic cases, however, the use of nerve sedatives such as sodium bromide and phenobarbital in addition to tincture of belladonna, atropine or other similarly acting drugs may be of value in the prevention of spasm.

The gall bladder itself may be spastic and a sudden response to a stimulus for contraction may result in pain. Morphine produces an increase in tone of smooth muscle. In the presence of spastic obstruction large doses of morphine may increase pain by favoring contraction of the gall bladder and at the same time contraction of the duodenum. The use of small doses combined with atropine may help to avoid pain which is caused by spasm. In contrast to the spastic type of gall bladder the stimulus for contraction may occur without a prompt response. The atonic gall bladder favors stagnation by responding poorly to stimulation. Frequent feedings, including fat with the addition of bile salts, may improve the tone of the gall bladder and prevent stone formation.

Pathology. Inflammation of the gall bladder may be produced by infection or by a chemical (toxic) bile. Frequently it follows obstruction of the cystic duct. The inflammatory process may result in organic changes in the wall of the gall bladder. Decrease in the functional capacity of the gall bladder (its ability to concentrate) is related to the extent of damage to the mucous membrane. The decrease in the motor function of the gall bladder is related to the extent of damage to the musculature of the organ. When a gall bladder ceases to concentrate or expel bile its functional utility is destroyed. If infected, it remains as a focus for the maintenance of disease about the liver, pancreas and duodenum, or it may be the seat of neoplastic growth. A functionless gall bladder that produces recurrent acute symptoms is unlikely to improve on any type of medical management.

That infection does not account for all instances of chronic cholecystitis is shown by the failure of investigators to demonstrate bacteria in over 50 per cent of the cases.

Stone formation is related most commonly to infection or stagnation of bile in the gall bladder. While stones result from some pre-existing condition, they themselves initiate further changes in the gall bladder or ducts. In hemolytic jaundice large amounts of bilirubin are excreted by the liver. Frequently accumulations of pigment in the gall bladder result in stone formation. The demonstration of stones in the gall bladder in the presence of jaundice may be related to excessive blood destruction and this condition should be kept in mind in the diagnosis of gall bladder disease. Obstruction in the cystic duct over long periods of time favors infection.

This is accompanied by the secretion of calcium into the gall bladder. Calcium stones may form or the gall bladder may fill with a variable amount of debris and amorphous calcium deposits (milk of calcium gall bladder). Frequently bile pigment and cholesterol stones may be present in the gall bladder before infection occurs. Following infection calcium is deposited on the pre-existing stones, coating them so that they appear as opaque rings in the x-ray examination. Cholesterol stones may be solitary or multiple. They result from the precipitation of cholesterol in the presence of insufficient bile acids. Most stones in the gall bladder are of mixed types, but contain predominantly bile pigment, cholesterol or calcium.

Obstruction of the neck of the gall bladder by a large stone prevents the entrance of bile into the gall bladder. If no infection occurs, the gall bladder fills with a mucoid secretion from the neck and infundibulum. Gradual distention follows resulting in hydrops.

Stones are responsible in 90 per cent of the cases of acute infection. Empyema, perforation, gangrene, peritonitis, subphrenic abscess, cholecysto-duodenal fistula (at times followed by intestinal obstruction due to lodgement of a stone in the ileum) and other serious complications may result from calculous disease of the gall bladder. The disastrous effects of neglected gall stone disease in which symptoms are constantly recurring, warrants the removal of the diseased gall bladder as an elective operation. There are instances in which gall stones are found during the course of an examination for unrelated complaints. Many individuals have gall stones without symptoms. This must be considered in evaluating the total picture, since other diseased organs rather than the gall stones may be directly responsible for the symptoms.

SUMMARY AND COMMENT

Gall bladder disease is a blanket term used to cover many different types of changes in the gall bladder or related viscera. A differentiation must be made between disease due to organic changes and disease due to spasm or disturbances in adjacent or related viscera. The prevention of gall bladder disease is a subject that has not been given much attention. In view of the present information available, stagnation of bile, excessive concentration and cholesterol precipitation in the gall bladder may be prevented. A dilute bile flowing freely is least likely to result in obstruction. Proper treatment requires a thorough analysis of the patient's complaint, a complete physical examination and the employment of such laboratory facilities as will aid in evaluating not only the nature of the gall bladder disease but also the general health of the patient. The importance of changes in adjacent viscera and the complications incident to stones in the common duct have been mentioned but not discussed. The role surgery plays in treatment will be more successful when those conditions not associated with definite organic changes or stones are excluded. The elective removal of a diseased nonfunctioning gall bladder which has produced symptoms will avoid the disastrous results that follow treatment of the more severe types of gall bladder disease.

KAOLIN-ALUMINUM GEL (KALUM) IN THE THERAPY OF PEPTIC ULCER

F. Neuwelt, M.D.
AND
F. Steigmann, M.S., M.D.
CHICAGO

Gastroenterologists and practitioners in general are recognizing more clearly the protean nature of peptic ulcer both from the point of view of the symptom complex of the disease as well as from the manifold aspects of the treatment of the disease syndrome. The ideas of Sippy relative to the treatment of peptic ulcer dominated medical practice in the United States for at least a generation. Only in recent years have modifications been made in the orthodox Sippy management of peptic ulcer. This was due first to the recognition that certain harmful effects may result from the indiscriminate use of alkali powders; secondly, progressive clinicians realized that absolute or even relative neutralization of gastric acidity is not the sine qua non of the treatment of peptic ulcer. Psychogenic, social, economic, sexual and other problems in the causation of peptic ulcer are appreciated more and more and the amelioration of such problems is now recognized to be as important

From the Cook County Hospital Medical Services and the Gastrointestinal Clinic, and the University of Illinois College of Medicine, Chicago, Illinois.

as the use of medicines in the treatment of ulcer. Furthermore, instead of the simple alkali therapy of a generation ago, a host of new therapeutic agents has become available for the treatment of peptic ulcer: various types of antacid powders, mucins, antispasmodics, alumina gels, etc. Most of these preparations singly or in combination have good therapeutic effects at one time or another in the majority of ulcer patients.

These newer pharmaceutical agents for the therapeusis of ulcer have come into vogue not so much because we have become cognizant of the dangers of alkalosis and the evils of the secondary rise of acid after administration of alkalis, but because it was thought possible to evolve better drugs than Sippy powders on which many cases of ulcer did not respond well either clinically or roentgenologically. One of the newer substances now gaining increasingly rapid popularity in the treatment of peptic ulcer has been the amphoteric alumina gels, which reduce gastric acidity by adsorption and neutralization. These substances adsorb many times their own volume of hydrochloric acid, cause no secondary rise in gastric acidity, are not absorbed to any appreciable extent and cause no alkalosis nor any material change in the electrolytic balance of the blood plasma. Crohn[1] of New York was first in this country to suggest the use of aluminum hydroxide gel for the therapy of peptic ulcer. Since then, the results on the use of such amphoteric gels in the treatment of peptic ulcer have been published repeatedly and several such compounds have attracted widespread use.

Investigators studying the neutralizing powers of various compounds in an attempt to determine the ideal drug for the treatment of peptic ulcer by acid neutralization usually come to divergent results. Thus, for example Kraemer[2] advocates the use of magnesium trisilicate as the ideal antacid, while Kirsner[3] found that calcium carbonate given frequently is the best antacid. On the other hand, a group of workers in New York[4] now advocate a preparation of alumina which has no direct powers of neutralization but acts entirely by adsorption. In contrast to these, Steigmann[5] found little variation in the acidity modification from the use of alkalis, alumina gels, or mucins. Thus as yet, no unanimity of opinion obtains as to what is the desideratum in ulcer therapy: neutralization, adsorption of pepsin and hydrochloric acid, etc. It is not within the scope of this paper to discuss the above question at length.

Even keeping in mind the aforementioned, the alumina compounds have proved effective agents in treatment of peptic ulcer. This may be due mainly to the fact that they act by adsorption rather than simply by neutralization, binding mineral acids as HCl firmly since the alumina acts as a weak base. Such alumina gels have a mild demulcent and astringent effect on the gastric and intestinal mucosa. Komarov and others[6] have shown that peptic activity is decreased or abolished by the oral administration of such compounds. Mechanical protection to a gastric or duodenal ulcer is very desirable and is in part furnished by such aluminum hydroxide compounds which tend to coat the inflamed, ulcerated area, and to protect it from the chemical effects of HCl and pepsin, these latter in turn being removed by the adsorptive properties of the gel. It now becomes obvious that such a therapeutic agent would be far more effective if this action could be enhanced, thus tending to protect the ulcer from further corrosion. Kaolin (aluminum silicate) has been used since antiquity as oral medication in cases of diarrhea, intestinal toxemias, etc. Mutch[7] has shown that when kaolin is properly prepared, it forms a stable colloidal suspension which has high adsorptive powers for toxins, which by its mechanical action envelops bacteria and other noxious agents and which has a high affinity of adhering to surfaces as the gastric and intestinal mucosa. The literature is replete with references to the use of kaolin in dysenteries, cholera, etc.[8], [9], [10]. However, unless the kaolin is properly purified and prepared, it will not remain in colloidal suspension but will settle out and clump and have no effect aside from that of obstruction as a bolus of clay. Mutch[7] discusses this point very thoroughly in a recent article and shows how kaolin can be prepared to remain in colloidal suspension. It occurred to workers after the advent of aluminum hydroxide therapy that a mixture of kaolin with alumina would enhance considerably its properties as a mechanical agent to protect gastro-intestinal ulcerations because of the powers of the kaolin

for adsorption and its coating, emolient effects. Swalm[11] used such a combination years ago and since then a number of other articles have appeared on the use of alumina-kaolin mixtures, particularly in the treatment of dysenteries, colitides, etc.[12, 13]. It is true that the presence of the alumina tends to prevent and delay this settling out of the kaolin, but just this occurs unless the kaolin is properly prepared as shown by Mutch.

Material and Procedure — A mixture of alumina and kaolin (Kalum) possessing the properties described above recently was brought to our attention for the treatment of peptic ulcer. Kalum is an amphoteric gel containing 5 per cent aluminum hydroxide and 3 per cent kaolin both in colloidal form flavored with oil of peppermint and freely miscible in water. The particle size is such that the compound adsorbs at least twelve times its volume of N/10 HCl in 30 minutes as measured by electrometric titration. The kaolin used is so prepared that it remains as a colloidal dispersion indefinitely and no settling out or clumping occurs upon standing.

This preliminary report is based upon our observations with the use of Kalum during the past eighteen months in the gastro-intestinal out-patient department (Fantus Clinic) of Cook County Hospital. Kalum was administered to twenty-five peptic ulcer patients in the out-patient department and to an equal number of cases with other gastro-intestinal diseases in the wards. In order to try the product under the severest conditions in cases of ulcer patients, we tested the effects of Kalum only on those ulcer patients who had not been responding to other forms of ulcer therapy used in our clinic: namely, other alumina preparations on the market, antacid powders, belladonna, sedatives, diet, etc. Many of these patients had suffered from peptic ulcer for long periods of time; various complications of ulcer were present in one or another patient. In other words, the subjects used for this study constituted a group of cases refractory to treatment. Thus, although the actual number of patients studied is not large, each one was carefully selected for the study. During the course of the study itself the patient was switched from Kalum to other ulcer medications and then back again to Kalum, etc., in order to determine the efficancy of the preparation more exactly.

The dosage of Kalum used varied from one to two teaspoonsful in a little water three times daily to as much as four teaspoonsful taken as often as every two hours during the day and as needed at night. Some patients used Kalum only for a period of several weeks whereas others used the drug either intermittently or steadily for many months during the course of this study.

Results — Fifteen patients out of the group of twenty-five cases of peptic ulcer were studied intensively. From the results on these, only certain general conclusions as to the therapeutic efficacy of this compound in the treatment of peptic ulcer can be drawn. Statistical analysis is of little value in such a small number of cases. Six of fifteen patients under prolonged and careful observation were markedly and quickly benefited by the oral administration of Kalum; pain, discomfort, and vomiting being relieved promptly. The nine remaining patients did indifferently on Kalum; only three of these cases, however, preferred some other form of therapy.

Two typical case histories are given briefly below to illustrate the response to Kalum in patients refractory to other ulcer therapies at the time.

Mr. A. Z., age 42, Cl. No. 41-12351. "Ulcer operation" in 1931. Was on drugs and diet for several months thereafter; well clinically for next two years. Has had intermittent recurrences of ulcers since 1933. Worse in past six months; 15 pounds loss of weight in past year. Pains especially at night, relieved by food or soda for a short time, but with no improvement in general condition. Had much epigastric distress (hunched over with hands on stomach, etc.) when started on Kalum-z II-III, 5-6 times per day and p.r.n. at night. X-ray study at this time revealed an active pre-pyloric ulcer. Improved promptly on Kalum, less pain and no vomiting. Put on special ulcer powders after one week but patient preferred Kalum. Did not do well when placed on several other commercial alumina preparations. Only constipated slightly by Kalum.

Mrs. E. C., age 29, Cl. No. 41-1408. Was in Cook County Hospital in December, 1940 because of tarry stools and weakness but no other symptoms. X-ray revealed an active duodenal ulcer. Began developing epigastric distress one month later despite regular ulcer treatment. Pain was relieved by milk but not by several alumina preparations or Sippy

powders. Presented a picture of acute ulcer syndrome at this time. Placed on Kalum-z II, 6 times per day and p.r.n. at night. Felt better from first day. Found Kalum less constipating than another alumina compound she had been using. For two months the patient was switched from one type of ulcer therapy to another but Kalum continued to give the best results. At present, six months later, patient is on diet only and well clinically.

DISCUSSION

We are fully aware that the number of cases of peptic ulcer used in this study is small and that only 40 per cent showed remarkable results, while 60 per cent responded with indifferent results. We were, however, very stringent in our criteria of choosing patients for clinical assay, and in such intractable ulcer cases any measure which offers some hope of relief is worth trying. Thus a figure of 40 per cent for successful results gains added significance. Were we simply to have taken the first one hundred cases of peptic ulcer at the Fantus Clinic and switched them from whatever therapy they may have been on to the use of Kalum, the percentage of good results unquestionably would have been higher. Actually, the cases selected for our study represent less than 5 per cent of the total number of ulcer patients attending our clinic.

From the results of our clinical trial with Kalum we feel justified in concluding that Kalum represents a new and valuable addition to the therapeutic armamentarium for treatment of peptic ulcer; because of the properties inherent in both kaolin and aluminum hydroxide gel, the proper combination of these two into a single preparation results in a therapeutic product which is superior to the usual alumina preparations for the treatment of ulcer. Kalum seems less constipating than other standard alumina preparations when used in moderate to large doses. In some cases where equal quantities were employed, the usual alumina preparation had a constipating effect whereas Kalum had none. In fact, a number of patients ascribed a mild laxative effect to the use of Kalum. This lack of constipating effect of Kalum may represent indirect proof that the kaolin-alumina mixture employed in this product does remain in a fine state of dispersion in its passage through most of the gastro-intestinal tract. Some of the newer alumina preparations appearing on the market contain magnesium trisilicate in order to combat the constipating effect of the alumina. Large amounts of such a mixture may have undesirable effects. Of course, sufficiently large doses of Kalum will have a constipating effect. In diarrheas, ulcerative colitis, etc., the beneficial effects of Kalum are probably due to adsorption.

We have mentioned the "sticking" qualities of both Kaolin and alumina. Animal experimentation[9] has demonstrated how well kaolin adheres to intestinal mucosa. One property of such a combination of alumina-kaolin is to coat the ulcerated areas of mucosa and thus afford a direct physical barrier to noxious agents, irritants, etc. Another step in a study such as ours would be to select a series of active gastric ulcers as demonstrated by direct endoscopic examination and observe the adhering qualities of various ulcer drugs by subsequent gastroscopic examinations.

Kalum is not unpalatable when taken orally even in moderately large doses and this matter of palatability may play an important role in the therapeusis of certain ulcer cases. Such subjective likes and dislikes to medication must be taken into consideration very often and particularly in ulcer patients. The small amount of oil of peppermint makes administration pleasant and may even contribute to the therapeutic effect.[14]

We realize that Kalum is no panacea for all ulcer cases; however, there is no known treatment which will cure every peptic ulcer patient. In view of our good results with such a mixture of aluminum hydroxide and kaolin in a rather limited number of cases of intractable ulcer we believe Kalum of sufficient value to warrant wider clinical trial. This substance represents a simple and useful therapeutic adjuvant in such cases.

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THE TUBERCULOSIS OBSTETRIC PATIENT

FRED M. MEIXNER, M.D.
PEORIA

With the increase noted in the incidence of tuberculosis throughout the United States and the change of emphasis due to war time conditions it is of value to review some of the common problems presented by the pregnant tuberculosis patient.

The question of procedure in a given case involving the complication of pregnancy and tuberculosis needs the closest co-operation and study, not only by those who practice the treatment of tuberculosis, but by obstetricians and internists, to the end that the lives of the mothers may be preserved, their health conserved, and the lives of a large number of infants saved.

The conclusions reached by reading articles in the medical journals on the subject published in the past thirty years, both from general practitioners and specialists, has shown a wide divergence of opinion, seemingly supported by statistics of the observers, as to the effect of pregnancy on tuberculosis and as to the proper precedure to be followed when the two conditions under consideration are present. In the past some eminent men have leaned toward an active attitude, favoring interference by abortion in all cases of tuberculosis of the lungs, regardless of the type of disease, while others, equally eminent, felt that the risk of pregnancy for a tuberculosis woman is no greater, if properly treated, than for the non-tuberculosis pregnant patient.

With the progress of collapse therapy and early diagnosis the pessimism at times expressed is not as fully warranted as in the past and the harm that might have befallen these patients has been averted. There is no doubt that the gloomy picture displayed in the literature of both medicine and obstetrics of a decade ago and the statistics which supported this gloomy picture belongs in the past era when cases of tuberculosis and obstetrics were both conducted on the mismanaged techniques which have given place to the modern enlightened methods now used in both types of cases. Collapse therapy, adequate sanatorium management, local anesthesia, caesarian section, and better management of practically all the possible complications of pregnancy have changed the entire viewpoint in the tuberculous obstetric patient in the same relation it has improved our handling of cases when not combined. Intelligent cooperative management based on a common understanding of the underlying pathology and therapeutic rationale by the internist and the obstetrician gives us a solid foundation on which the successful management of these cases should rest.

The probable influence of the other complicating factor must be evaluated by the internist and obstetrician with regard to their probable influence on the tuberculous disease of the patient and on the pregnancy. A decision to permit the pregnancy to continue to delivery or to recommend its termination should be made only after all the factors of the given case have been given proper study, considering the disease, the mother, the child and the many other factors involved. When all these factors are given their proper values it will rarely be found necessary to terminate pregnancy if the patient can be provided with the proper facilities to control the disease during gestation, insure a proper delivery and provide adequate postpartum care. This may mean continuous observation and treatment by a physician specially trained in the management of tuberculosis pa-

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tients and should, preferably at least, mean sanitarium treatment or its equivalent for a longer or shorter period during and immediately after pregnancy. It may have to include premature delivery of the baby, termination of the pregnancy just before viability of the baby, or even the performance of a therapeutic abortion. The seriousness of the pregnancy to the mother is relatively small if these therapeutic measures can successfully be carried out, and, given good hospital care, skillful surgery and with local anesthesia at a properly selected time the risk is minimal and well worth assumption to insure a much wanted offspring.

Once pregnancy is diagnosed in the tuberculous woman or tuberculosis in the pregnant woman there need be no serious concern or panicky procedure, but the case should be carefully studied by the internist to determine the type, extent, and probable course of the disease in the immediate future, and by the obstetrician who must calculate the possibilities of the complications that might put excessive strain on the mother due to the continuance of the pregnancy and the ensuing labor.

The treatment of tuberculosis when pregnancy occurs should not be interrupted by the pregnancy. Pregnancy proceeding to successful delivery and recovery while the lung remains collapsed under artificial pneumothorax, phrenic interruption, or even thorocaplasty is by no means unusual today. A recurrence developing after delivery takes place in only a few properly managed cases.

The avoidance of pregnancy is the most important primary consideration for patient and physician. No woman who has active tuberculosis should consider pregnancy for at least two years after complete arrest of her tuberculosis or even longer if the treatment required to heal the lesion was difficult, or if there is even the slightest doubt in the mind of her physician. The diagnosis of tuberculosis arrest must be based on a very careful study of the entire progress of the case and must not be arrived at casually. Also, every available diagnostic aid must be used, resolving any doubt against a pregnancy. Many tuberculosis patients appear to improve throughout pregnancy, only to show a decided tendency toward aggravation of a mild lesion or activation of a dormant tuberculosis the first few months after delivery. This type of case is especially hard to prognosticate and should be sufficient reason alone for a reserved attitude toward allowing a pregnancy.

However, with a better and more intelligent understanding of the problem of each individual case on the part of the tuberculosis specialist and the obstetrician, the pregnant tuberculosis patient may emerge from her pregnancy experience (once looked upon as a most dangerous and unjustifiable happening) almost, if not quite as safely as the non-tuberculosis obstetric patient. We can only require of these patients the same requirement imposed on all obstetric patients — that the general condition of the patient shall be such that she can endure the changed bodily functions incident to her condition and have a competence of her organs to carry to a successful conclusion thru the stresses of delivery and the postpartum period.

Therefore when matrimony is contemplated by a tuberculous woman a very careful study should be made by her physician before allowing the possibility of pregnancy, to be sure that her condition will allow a reasonable chance that her chest lesions will remain quiescent, that she can stand a labor, normal or modified, and that satisfactory supervision and treatment can be provided. On such a complete study alone can be based a recommendation for or against marriage and in some cases the type of tuberculosis together with the nature of and severity of the lesions in other organs, may indicate postponement of marriage until these disabilities are eliminated.

Sterilization should be considered in cases where a slowly healing chest lesion is present, where a longer period than is deemed convenient must elapse before the marriage or where there is uncertainty as to the outcome of the healing of the chest condition. This can be done thru a small incision in the abdomen under local anesthesia, the tubes ligated, and the incision closed with no shock and practically no danger to the patient. In younger women and in those whose tuberculosis is of such a nature that the indication for sterilization is less obvious, contraceptive advice including the proper fitting of a diaphragm is the procedure of choice.

The adoption of a universal practice of tuberculin testing of all pregnant women, early

in the pregnancy, with X-raying of the reactors for active tuberculosis should be encouraged, and as voluntary tuberculin testing becomes more universal the solution of the problem of the tuberculous obstetric patient will be simplified when all known cases of tuberculosis infection will be recorded and all cases found in the early stages where adequate treatment can do most.

Early cases of tuberculosis usually do not offer a serious problem to the consultant when pregnancy complicates the picture. However, sometimes it is difficult to decide whether pregnancy has ensued. Tuberculosis may interfere with normal menstruation so that the sudden cessation of the menstrual flow in a woman previously regular may not have the same diagnostic value as it would have in a woman free from tuberculosis. Consideration must be given to other presumptive signs of pregnancy, such as breast changes, discoloration of the vaginal and cervical mucosa, dermal pigmentation and gastro-intestinal phenomena. The Friedman test and other reliable tests may have to be employed to determine the true diagnosis.

If and when the diagnosis of pregnancy in the tuberculous woman or the diagnosis of tuberculosis in the pregnant woman has been made the course of action must depend upon a consultation between the obstetrician and the internist. The study on the part of the obstetrician should indicate whether or not the evidence indicates a long difficult labor, a pregnancy complicated by serious depletion from nausea and vomiting, whether other serious damage to essential organs is present or expected later, and any other factors depleting the patients system. It should give information as to the dangers and difficulty of interrupting pregnancy under conditions present and the method suited to the case if decided upon. If pregnancy is carried forward to a viable child, he will have to decide when and how labor is to be induced, and forsee the obstetrical complications as they arise and direct their management. This information will allow the internist to judge the probable effect of the strain of pregnancy and delivery on the pulmonary lesion and make it possible to guard against advance of the disease. Thru such a plan of consultation and with the help of collapse therapy, intensive and prolonged sanatorium care the incidence and danger of tuberculosis in the obstetric patient has been greatly reduced and many fetal lives that previously would have been sacrificed by therapeutic abortion to save the mothers will be saved.

The age of the patient, the stage of the disease, and the type of lesion have a distinct bearing on the prognosis. The treatment would be quite different in a patient with a chronic fibroid or cavitation type of disease, with only a short expectancy of life, than it would be in a young woman in early pregnancy with a very active or infiltrating lesion. It has been repeatedly stated that tuberculous women may enjoy a temporary remission of the disease during pregnancy, only to relapse with increased activity after parturition.

If pregnancy has taken place in a tuberculous woman, there are two courses that can be followed, requiring the closest study and keenest judgment for a decision as to the proper course treatment must pursue. One is to interrupt the pregnancy, then devote all and every modern method to cure her. When the cure of her tuberculosis is complete, then and then only, let her bear children. The other is to immediately place the patient in a tuberculosis sanatorium for observation, from six weeks to three months. (It is better to interfere too soon than too late.) If improvement is satisfactory, the lesion is found to be minimal, and the sedimentation test satisfactory, the case may be allowed to go on, using collapse therapy and all other means indicated to control the tuberculosis. If the tuberculous condition grows worse, interruption of pregnancy is indicated immediately, preferably before the end of the second month, followed by active tuberculosis therapy.

The secondary question, to decide in the presence of tuberculosis and pregnancy can be stated thus: Is therapeutic abortion justified in tuberculosis? After reading the voluminous articles and reports of innumerable investigators, the widely divergent views of the writers seem irreconcilable, but on careful study the general principles that apply become very simple — more simple than trying to reduce them to print.

In some cases, abortion acts as a stimulus to the chest lesion, and non-interference is preferable, especially if it is felt after careful ob-

servation that abortion will mean death for both mother and child, while allowing progress of the pregnancy may mean death of the mother, thus sacrificing every thing for a live child. Early induction of labor and forceps delivery may be indicated. With collapse therapy, even these apparently hopeless cases can often be carried through normal pregnancy and delivery, treatment being continued after delivery. By doing phrenectomy or phrenic crushing and using greater than usual pressure by pneumothorax, and, in selected cases, holding the diaphragm by use of pneumoperitoneum after delivery, the prognosis is materially improved. The efficiency of collapse therapy may limit the indications for therapeutic abortion in this type of case.

It may be stated as a general rule, however, that in most cases of tuberculosis, it is best to remove the pregnancy and let the woman have all her facilities for conquering the tuberculosis. Then, after the danger from tuberculosis is past, let her produce the offspring she desires. In other cases, as stated above, a rather large group becoming larger as a result of early diagnosis and collapse therapy, and selected by careful observation, with the patient constantly under good sanatorium treatment we may preserve the fetus, and therapeutic abortion may be withheld. Artificial pneumothorax often brings an active lesion under control and pregnancy may proceed without complication. Moreover, if the lesion is well collapsed, it is not usually necessary to separate the mother and infant after delivery to prevent infection of the infant from the mother.

In none of these cases should lactation be permitted, as it increases the hazard for the mother by using her recuperative and healing powers for the production of milk. If it is an open case, protection of the infant from infection is imperative.

When pregnancy has advanced to the fifth or sixth month before the tuberculosis is recognized as a factor in the case it is best to allow pregnancy to continue at least until the 32nd week and it may then be terminated by induction of labor or caesarian section.

The time for intervention, when decided upon, is not always easy to determine and depends upon how well the mother is able to compensate for the additional strain of the later months of pregnancy. The longer the fetus can remain in the uterus with safety to the mother, the better its chances for living. Falls states that it might be naturally supposed because of the absence of all trauma that there should be no danger to the fetus in Caesarian section and states that such is not the case. In a fairly high percentage of cases there occurs following delivery of an apparently lusty baby a gradually progressing weakening of respiration with blue spells and finally death. Autopsy in these cases shows a marked atalectasis which so far has not been explained. The more premature the baby, the greater the danger of this complication.

If a woman with far advanced tuberculosis is found to be pregnant and wishes to risk all for a living child, she should be allowed to do so in the interest of the fetus, since the prognosis for the mother is frequently poor, irrespective of the pregnancy. Pregnancy does constitute a serious drain on the tuberculous mother. The fact that she gains weight and looks better during pregnancy is misleading to the clinician and constitutes one of the most puzzling phenomena in clinical medicine. There is something that carries the chronically ill and doomed woman thru pregnancy until her function with regard to propagation of the species has been fulfilled and then allows her to die, sometimes quickly. Had this phenomenon not been observed in the woman with cancer, diabetes and pernicious anemia, I would be inclined to believe that in the case of tuberculosis it is due to elevation of the diaphragm and a gradually increasing partial collapse effect of the pregnant uterus. The rapid invasion of the disease shortly after delivery could certainly be explained by the sudden relief of the pressure allowing the lung to expand. This, then, suggests a definite indication for collapse therapy in the first few hours or days after delivery of the active, tuberculous woman who goes to or near full term pregnancy.

The technique of delivering the tuberculous woman is one that must be carefully decided upon after close study of the individual case. A woman with a closed quiescent chest lesion who has had adequate care during pregnancy may

be handled during labor as any other pregnant woman. Gas anesthesia is preferred to ether to avoid the irrating effects of the latter agent. If the second stage of labor exceeds an hour, a forceps delivery is indicated to avoid un-necessary pain, exertion and exhaustion. A local block of the perineum with a local anesthetic may be used to relax the outlet, allowing delivery, spontaneous or instrumental with the least general anesthetic and allow post delivery repair without further general anesthetic.

Conservation of blood loss is to be encouraged so as to allow all possible help to the patient to battle her tuberculosis and a supplemental blood transfusion may be indicated in some cases. Frequent blood counts to check hemoglobin and red counts for anemia during pregnancy may indicate therapy and may disclose an indication before delivery for a transfusion so that suitable donors may be on hand in case of post partum or pulmonary hemorrhage. The danger of even a small blood loss during labor in these anemia cases deserves serious consideration, since under the circumstances a 200 or 300 c. c. blood loss which ordinarily could be lost without danger may prove rapidly fatal.

Briefly, the principles to be followed in the tuberculous obstetric patient can be stated in the following items.

First, no one has shown definitely that pregnancy is good for the health of a tuberculous woman in any type or stage of tuberculosis. A neutral effect of pregnancy on a tuberculous lesion is not asked — the risks are too great.

Second, most investigators, easily 75%, believe that pregnancy can or does aggravate tuberculosis, while no one has proven that abortion properly performed early will aggravate an early or arrested lesion, if proper tuberculosis therapy is followed afterwards.

Third, every one admits that pregnancy places a severe strain on a tuberculous woman's resources and strength, and that labor is fraught with immediate and remote perils not present in a normal woman.

Fourth, after labor or abortion, treatment for the chest condition should be carried on vigorously, treatment must be continued over sufficient time to guarantee arrest and should not be discontinued too early, in any event, only after careful observation and study by an experienced phthisiotherapist. Subsequent pregnancies should be allowed only after careful study of the case has shown the chest lesion to be completely arrested or under complete control.

Sixth, if therapeutic abortion is decided upon it should be done as early as possible, with spinal or gas anesthesia, and a technique adopted to ensue as rapid fetal delivery as possible.

Seventh, after the fourth month of gestation the effect of intervention is comparable to a full term delivery and with proper collateral care in cases that have not shown up exacerbation earlier, the risk can be safely assumed, the obstetrician being ready to interfere as soon as labor starts, so as to terminate it rapidly, as by forceps, sparing the patient the stress of inhalation anesthetics. In selected cases labor may be induced after the thirty-second week.

Eighth, the best prognosis for mother and child in any case depends on the close cooperation between the obstetrician and phthisiologist, with a careful evaluation of the chest lesion and the obstetrical problems involved to insure the individulization of the treatments for each case of pregnancy in the tuberculous patient.

DISCUSSION

C. Wesley Eisele, M. D. (Chicago): Mr. Chairman, Ladies and Gentlemen: I have listened with keen interest to Dr. Meixner's presentation of his concepts of the problem of tuberculosis in pregnancy, and with the principles which he has laid down I am in hearty agreement.

There is still controversy concerning the effect of pregnancy upon the course of tuberculosis. This problem is notoriously difficult to submit to statistical analysis but it has been our experience at the University of Chicago Clinics that the effects of pregnancy are predominantly bad; on theoretical grounds the physiological and pathological changes that occur in pregnancy are all bad with one possible exception. I speak of the elevation of the diaphragm that occurs in the last half of pregnancy. For many years this has been considered as a possible benefit to the tuberculous patient by giving a form of collapse therapy, but recent investigation has shown that this is not so. The elevated diaphragm of pregnancy moves about as much as a normal diaphragm. That is, the respiratory excursion is not decreased and may possibly be increased, and the lung is not given the rest we had formerly supposed. The elevated diaphragm of pregnancy is therefore not comparable to the high immobile diaphragm of phrenic nerve interruption.

Entirely aside from the biologic effects of pregnancy upon tuberculosis, there is another deleterious effect which is very real and very practical. I speak of the physical and emotional strain which is involved in the rearing of a new-born infant. This is particularly marked in those homes which cannot afford to hire adequate household help, but even under the best of conditions the strain is considerable. All too often the health of even normal mothers is endangered.

Because of these considerations, I agree with Dr. Meixner that a tuberculous woman should not become pregnant if the tuberculosis has been active within relatively recent years. When the tuberculous woman does become pregnant, however, she does require the very best medical care obtainable, both from the obstetrician and the internist.

I would like to enter a plea to the pregnant tuberculous woman whose tuberculosis is not suspected. Dr. Meixner touched upon this subject and I would like to elaborate it very briefly. This problem is certainly much more widespread and serious than is generally realized. It has become a well-known fact that dependence upon symptoms and upon the presence of abnormal physical findings is frequently quite inadequate in detecting pulmonary tuberculosis. In many cases the disease is far advanced before any symptoms are produced, and it is indeed the exceptional case in which minimal lesions produce notable symptoms. I believe it is significant that more than 80 per cent of all cases of tuberculosis which are reported to Health Departments are already in an advanced stage of the disease.

The dependence upon even the most skilled physical examination has likewise come to be regarded as fraught with many pitfalls in detecting pulmonary tuberculosis.

I would like to cite just one case from the growing literature, — the work of Sampson and Brown at Trudeau Sanitarium. These investigators carefully examined over a thousand patients with tuberculosis and in 40 per cent of them there were no physical signs indicating the presence of the disease. In an additional 36 per cent, the physical signs indicated far less disease than was actually present as shown by the roentgenograms.

Because of these considerations, in 1934 we innaugurated a routine chest fluoroscopic survey among the prenatal patients at Chicago Lying-in Hospital. All patients attending the prenatal clinic were invited to attend the chest clinic for a fluoroscopy of their chest without charge, and those found to have definite or suspected lesions were referred for a stereoscopic chest films. We have recently summarized the data from this survey and found that of the nearly 11,000 patients examined, 1 per cent were found to have unsuspected tuberculosis of clinical importance. Of these, about two-thirds were found to be active.

During the period of the survey, — about seven years, — there were 15,000 patients attending the prenatal clinic, about 11,000 of whom reported for chest fluoroscopy. During the first four years, when they had to go to the chest clinic, only two-thirds of the patients appeared for the chest examination. At present we have a fluoroscopic room in the prenatal clinic and we are now getting 100 per cent of the patients.

Of these 11,000 patients fluoroscoped, a total of 110 cases of unsuspected tuberculosis of clinical importance were discovered by routine fluoroscopy — 74 per cent were found to be active, 36 per cent inactive.

As a comparison with another important problem in pregnant women, we summarized the number of cases of unsuspected syphilis discovered by routine Wassermann and Kahn tests in these same patients during the same period. In the 15,000 patients there were 82 cases, giving an incidence of .54 per cent of unsuspected syphilis, which is just about one-half the incidence of unsuspected tuberculosis.

What is the significance of discovering that 1 per cent of our pregnant women have tuberculosis? As a means of evaluating this, we collected the published reports, and in a few cases the personal communications, of the incidence of tuberculosis in obstetric patients from eight institutions in which special case finding methods were not employed. In the aggregate, 82,472 obstetric patients, there were fifty-five cases of pulmonary tuberculosis known, — an incidence of .067 per cent. The highest incidence was .14 per cent.

For ready comparison I put the data of our fluoroscopic survey here and, as you see, the incidence of .96 per cent, our total tuberculosis, was fifteen times as great as our unsuspected tuberculosis. It was even more striking that the active tuberculosis which we discovered was ten times as great as that known in these 82,000 obstetric patients. From this I believe it is a reasonable deduction that unless some roentgenologic or other special case finding method is employed, we are missing 90 per cent of all active tuberculosis.

In 1937 the Illinois Hygienic Marriage Law became effective. We were interested to see if that had any effect upon the incidence of syphilis. We divided our data into two periods, — before 1937 and after 1937, — for unsuspected tuberculosis and for unsuspected syphilis. In these two periods the incidence of unsuspected tuberculosis remains essentially the same, — 1.06 per cent whereas the incidence of unsuspected syphilis fell down from .87 per cent down to .3 per cent, a decline to almost one-third of the former level.

With such very gratifying results occcurring from mass survey methods in syphilis, I believe we could expect equally satisfying results to accrue in mass case-finding surveys for pulmonary tuberculosis.

In conclusion, I would like to remind this audience that although tuberculosis has moved from first place to seventh place as the cause of death in the general

population, in the age-sex group of young adult females which includes the child-bearing period, tuberculosis is still first as the cause of death. Tuberculosis accounts for about 20 per cent of all the deaths in this group. This is twice the incidence of deaths from all pueperal causes.

Dr. John Joseph Gill, (Chicago): I would like to congratulate the doctor on his essay. I am quite sure that I agree with every statement which he has made, therapeutic abortion is seldom indicated.

Dr. Fred M. Meixner, (Peoria): There are two points I want to again stress. First, every case must be individualized. There is no routine chart that you can put up and treat every case by that chart. You will have to individualize each particular case.

The second thing is to again emphasize the need for tuberculin testing of every woman who is pregnant in our maternity centers, doctors' offices and everywhere, to find these unsuspected cases of tuberculosis.

We now have a new Director of the Division of Tuberculosis in the Health Department in the State of Illinois and we expect to make it possible to find where tuberculosis still exists in the State and thus will uncover a great many cases of tuberculosis among pregnant women and mean a more intelligent follow-up of the pregnant tuberculous woman.

Again I want to thank the Section for the opportunity of appearing on the program.

PSYCHOTHERAPY IN GENERAL MEDICINE AND SURGERY

Tom Bentley Throckmorton, B. Sc., M.D., F.A.C.P.

DES MOINES

From time immemorial mankind has practiced the healing art. Excavations of aged ruins have brought to light undoubted objective evidence of this fact as is indicated by the finding of crude instruments and other apparatus which were used in the practice of medicine and surgery by the progenitors of our profession. The use of metallic tractors, the laying on of hands, the blessing of the handerchief, the beating of the tom-tom by the Indian medicine man are all matters of historic record as means used by some individuals, in the rather near past, for the prevention and cure of disease. The great doctrine of Christian Science was inaugurated and developed during our time. It had its origin in the fertile brain of Mary Baker Eddy, and, since her demise, its teachings have continued to flow and overflow upon thousands and thousands of her disciples and followers. As a physician, I have no personal quarrel with Christian Science per se. Undoubtedly the work of this particular church has done a great service to many individuals who, distraught in soul and mind and body, yearned for some sympathetic hand to guide them and for some attentive ear into which they could pour their imaginary troubles. But I always have felt that the name — Christian Science — was a misnomer and that the Church Scientist paraded under false colors. Certainly it has no legitimate right to imply that its religion is both christian and scientific. Years ago I was impressed with the reasoning of the noted fictitious Irish character, Mr. Hennessy, when he debated the relative merits and demerits of Scientific Medicine versus Christian Science with his fictitious friend, Mr. Dooley. After arguing the subject back and forth all the way from Dan to Beer-sheba — and apparently getting no place as far as verbal pyrotechnics were concerned — Mr. Hennessy gave a Parthian thrust to his opponent, Dooley, when he said, "And I say, Dooley, if the Christian Scientists had a little more science and the doctors had a little more christianity, it wouldn't make very much difference which one ye employed so long as ye had a good nurse." It cannot successfully be denied that Christian Science is but a form of psychotherapy emanating from the Mother Church in Boston. As medical men we should have no quarrel with its devotees save only when an attempt is made by some ardent adherent to interfere with public health measures or where a life is jeopardized because some person is unwilling to admit that disease or illness is due to anything other than a mental error. I have no doubt that indifference on the part of the medical profession to complaining mankind is largely responsible for many individuals seeking solace through the Church Scientist. We, as physicians, have not performed our entire duty when we inform a patient that he has no organic disease by which to explain his various somatic symptoms, and so dismiss him with a curt wave of the hand. When we do this we fail to realize the great influence which mind has over matter. We fail

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to grasp the all significant fact that such a patient is mentally sick and that his bodily symptoms are but the reflection of an emotional instability. We never should antagonize the psychoneurotic patient by arguing with him. All too well is he convinced that his bodily complaints are the result of some underlying disease, else why should he have symptoms! Years ago, Dr. S. Weir Mitchell revolutionized the treatment of this type of patient by means of his world famed "rest cure." Mitchell realized the one thing which his contemporaries had failed to recognize — namely, that illness, be it of mind or body, is due largely to two factors, undernourishment and fatigue. He was the first to apply full feeding and rest to the individual who was the possessor of an overworked and under-nourished body and whose mind, often, was filled with fears which were reflected unfavorably on the physiologic function of various organs of the body. His book "Fat and Blood" sprang from his experience with a great group of patients in which he saw their fears, doubts, worries and anxieties disappear when their bodies were freed from fatigue and their nerve and muscle energy once again was restored to normal. But I am sure that Mitchell would have failed, just as others had failed before him, had he stopped with the application of his treatment to the physical. His keen insight into human nature — his realization of the action of mind over matter — drew him a step forward and saved him from the same pitfall into which other clinicians had fallen. Here he showed his shrewdness by applying himself as a therapeutic agent. His personality, his ability to make a patient do what others were unable to make him do, his talent to literally take possession of his patient and dominate his every activity — whether it was mental or physical — were the secrets of his success and were the means which enabled him to get results with his rest treatment where others had failed. Psychotherapy — properly applied — was a very decisive therapeutic means in his hands. True it is that Mitchell often resorted to methods of cure which were heroic to say the least. Some years ago, Dr. Beverly R. Tucker, of Richmond, Virginia — an old extern of the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, an institution made world famous by Mitchell and his co-workers — related to me a story which well illustrates the diagnostic and therapeutic acumen of this noted physician. It appears that a lady of means had been confined to her bed in Johns Hopkins Hospital on account of a paralytic condition. The attending physician had been unable to do much for her. Finally, in desperation, the counsel of the noted Philadelphia physician was sought. Accordingly, Dr. Mitchell made the trip to Baltimore. He entered the sick room in company with the local doctor, house physician and nurse. After going over the case history and listening to the patient's story, supplemented by a rather cursory physical examination, the consultant asked the physicians and nurse to retire from the room. Shortly afterward the good doctor joined the others in the corridor of the hospital. As the group started to stroll down the hallway their progress suddenly was stopped as a scream came from the room only to be followed quickly by the appearance of smoke emerging from the open transom. Almost simultaneously the door flew open and the heretofore bedridden patient, crying hysterically, rushed from the smoke filled room. Dr. Mitchell, in his uncanny way, had sized up the situation almost at a glance. Recognizing the paralysis as a functional rather than an orgnic one, he deliberately had set fire to the bed clothes and then had left the room. The result was so miraculous, and the cure so spontaneous, that the room became known as the "cure room." Needless to state, I doubt if any physician today would have the audacity to duplicate Weir Mitchell's applied therapy even if he knew he was dealing with a case of hysterical paralysis. It does show, however, that the good doctor resorted to psychotherapy and that he used it as a therapeutic agent in more ways than one.

Several years ago this country was taken by storm with an old kind of psychotherapy clothed in up-to-date and stream-lined garments. Professor Coue, of France, was the originator of the new cure which was heralded in this country from coast to coast and from Canada to the Gulf of Mexico. "Day by day — in every way — I am getting better and better," was the simple prescription of this erstwhile apothecary of France. Thousands of peo-

ple listened to his lectures and many proclaimed the benefits of his remarkable formula as they gladly deposited their good American dollars in his coffers. Any physician knows that the symptoms of organic disease cannot be glibly chanted away by the repetition of mere words. Aside from Divine miracles, the dead no longer rise and the voice, once stilled, is forever silent except it be reproduced through the medium of the phonograph. And yet, Coue, with the magnetism of his personality and a set phraseology, literally helped thousands of psychoneurotic individuals by improving their mental hygiene. Of course, the professor went over big because he moved continually to fresher and greener pastures. A new broom always sweeps clean providing the one who uses it applies the proper amount of energy to the handle.

Now, what is psychotherapy? Is it something new, or is it something that only physicians who are interested in matters pertaining to the mind, use and understand? As a matter of fact, psychotherapy is used, consciously or unconsciously, by every physician. Every good doctor is a psychotherapist, believe it or not. In the art of medicine, the basic element is the psychologic insight into the patient's mentality. This is of great fundamental importance. Consequently, no physician today can practice successfully without knowing something of the new psychoanalytic approach or of psychiatry, since a large number of diseases of modern man belong to that great class called neuroses. This has well been emphasized by the late Dr. David Riesman in his book, "Medicine in Modern Society." "The laity and many physicians as well," states Dr. Riesman, "think of neurosis as something by itself, as apart from organic disease. It is true, nevertheless, that a neurotic element is present in many organic diseases and nearly constantly in those of chronic nature. The majority of civilized human beings are, at one time or another, a prey to neuroses, to those disturbances that cannot be discovered by ordinary methods of diagnosis, by means of instruments of precision, but are revealed to the physician by his understanding of human nature and to the patient by his own self-analysis aided, it may be, by the guidance of a psychically minded doctor."

As I understand, psychotherapy is the scientific control of mind of one individual by another in matters pertaining to health — in overcoming the mental mechanitions of another who thinks he is ill of a disability which exists only in his mental sphere. In practically every case, in which disability exists, physical and psychic elements are present in a greater or lesser degree. Neurotic or psychogenic symptoms are, not infrequently, in the foreground. It is up to the physician to ascertain, if possible, to what extent the symptoms of such a patient are physical and to what extent are mental. The sooner the physician learns to treat his patient as an individual rather than to treat a disease, the sooner his efforts will be crowned with success. The physician who never has been a patient, who never has been seriously ill, who never has undergone a major operation, who never has seen death stare him in the face — no matter how kindly, how consicentiously, how sympathetically he treats his patients — still lacks that understanding of the human mind which has been broadened and chastened by such grave experiences. This is well illustrated in the case of a surgeon who always had enjoyed excellent health. Nature had endowed him with a magnificent physique. No amount of work seemed to fatigue him, either mentally or physically. While he was kind at heart, yet he was prone to feel at times that patients made unnecessary complaints about physical discomforts which he believed to be trivial. Stricken in later years with an incurable malady, himself a patient on the operating table, obliged to drink from the cup whose contents were tinctured with physical pain and mental anguish, he confessed to me that never before had he understood the viewpoint of his patients. Though always he had tried to be considerate of others, his great regret was that he had not had the experience he then was undergoing. I long have felt that if it were possible for everyone, who practiced the healing art, to have experienced some of the bitterness of human suffering and mental misery, he would become, automatically and instinctively, a better physician. Perhaps in that event, some surgeons would not be so prone to belittle the patient's fear of the antiphlogistic touch of the aseptic scalpel. Neither would the physician so blithely and garrulously relate, before his patient, the

dangers connected with his illness or enlarge upon the complications which at times develop in the course of his disease. He who understands his patient because he has undergone a similar experience, is a more sympathetic and understanding man of medicine. He who has taken literally and put into practice the Golden Rule — "do unto others as ye would that they should do unto you" — is the true physician.

I already have spoken of the rôle which fatigue and ill-nourishment play in the production of disease. There also are other factors which have a distinct bearing on the physical and mental welfare of individuals. I refer to the social, the religious and the economic problems with which people are confronted. I am sure that one of the great questions which so often is overlooked by the physician — and one which is productive of so much worrying and complaining on the part of the patient — is whether a given individual is properly integrated to his environment. That is to say, is the patient happy in his home surroundings? Is he satisfied with the conditions under which he works? Has he religious worries which prey upon his mind? Has he adjusted himself to the social fabric in which he lives? Has he economic problems — real or imaginary — which harass his thoughts by day and make for sleepless hours by night? Unless these problems can be solved, or the patient can be taught to adjust himself to circumstances over which he has no control, no amount of medicine or surgery will relieve him or cure him of his complaints, be they physical or mental in origin. Many a neurotic woman has undergone a surgical operation because she was told by her surgeon that her complaints would no longer exist after he had skillfully restored her anatomy to what it was before she got what she then had. True it is that the surgeon, arrayed in blood-stained gown and rubber-gloved hands, makes a deep impression on the relatives and friends of the patient as he explains to them the intricacies of the operation while they stand in the corridor outside of the operating room. He knows full well that his remarks will be conveyed in due time to the patient who has just been wheeled to her room. True it is that the patient feels much better — following her post-nausea and post-enema days — as she convalesces from her trying ordeal. And why should not she feel better? Why should not her complaints disappear as do ships that sail into the night? Has she not been assured that she again would be well? Have not the family, relatives, friends and neighbors showered sympathy upon her and deluged her with flowers and gifts? In many instances the psychotherapy thus used — consciously or unconsciously, together with properly called for and properly executed surgery — does restore the patient to lasting health. On the other hand, he who overlooks the fact that symptoms referred to the physical but emanating from the mental sphere are not to be permanently helped by surgery or medicine is doomed to share a disappointment which is almost certain to come to the patient. Attempts to alleviate such symptoms by surgical procedures, or by shotgun prescriptions, invariably fail.

Now, I would not have you believe that the surgeon is the only one in our profession who has erred at times in his attempt to relieve a physical complaint when the causal factor was strictly a mental one. The physician has been just as prone to commit such errors, although it is true that the psychic reaction attendant on an operation is far greater than that which results from a bedside conference between patient and physician. To that extent the surgeon has the advantage over his medical confrere as far as environmental suggestion is concerned. What both physician and surgeon forever need to keep in mind is that disorders of mood and emotions are not infrequently accompanied by symptoms which are of a physical nature, and that many of these patients will tell only of their physical symptoms and entirely neglect to say anything about their changing moods and emotional upsets. It may be perfectly obvious that some existing pathology is present in a given case, but when one discovers that the mental state of his patient far overshadows any symptoms due to existing pathology, it is unwise, indeed, to attempt to eradicate a symptomless pathologic condition in the hope that it will cure a disordered psyche. It is here that many failures in medicine and surgery occur. It is in the treatment of symptoms, and not of their cause, that disappointment occurs to both patient and physician.

The following is a case in point. An elderly widow, now in her late sixties, has been under

my professional care, from time to time, for the past eleven years. During most of the time she lived on a farm in a nearby county. For many years she has been aware that her heart had undergone changes due to valvular lesions, the result of repeated attacks of tonsillitis during childhood. However, the cardiac change was symptomless. Aside from a little nervousness, associated with insomnia at times, and an occasional attack of migraine, her complaints were of no moment. Then came a change in her life. She moved from the farm and, with her daughter, went to live in the county seat. Dissatisfaction and disinterest in her new surroundings soon asserted themselves. She began to get moody, lost her appetite, and became antisocial toward her friends and neighbors. Somatic complaints, vague and bizarre in character, crept into the clinical picture. She took to her bed and resigned herself to the fate of invalidism. All efforts to cheer her up or to make her feel that her symptoms, her fears and her anxieties were without physical cause, were without avail. Her weight dropped from 140 pounds to 97 pounds. However, she complained of no symptoms referable to her gastro-intestinal tract excepting the loss of appetite. She entered a local hospital for observation. A careful physical examination failed to reveal any organic change as a cause of her psychoneurotic state. X-ray examination of the digestive tract brought to light the presence of unsuspected and symptomless gall-stones. The nature of her illness was explained to her family. Even if one had felt that her gall-stones were the cause of her manifold symptoms, it would have been unwise to advise surgical intervention on account of her extreme physical weakness. I felt that an unstable emotional state was the primary cause of her illness and that her bodily condition was but the end result and outward reflection of her unhappy frame of mind. With the completion of her examination she was discharged from the hospital. Sometime after her return to her home a cardiologist was called to see her. No doubt this action was taken because of some complaint she made about her heart. Of course the specialist found what had been present for many years; namely, cardiac hypertrophy and dilatation due to incompetent mitral and aortic valves. Having given special attention to diseases of the heart, quite naturally there was nothing for him to do but to ascribe her condition as secondary to cardiac disease and to prescribe a therapy for a heart which showed undoubted organic change but which was doing good and efficient work. But the patient got no better fast. Finally in desperation her family again brought her to Des Moines and placed her in a nursing home. Her mental state was that of one who had given up all hope of recovery. Her emotions were unstable, she was extremely moody, her thoughts during her waking hours were filled with fears and anxieties and she resigned herself to a state of invalidism from which she saw no way to recovery. There was no evidence of cardiac failure. The change of environment, forced feeding and rest, a pseudo-appetite created by the use of insulin and an ever cheerful and encouraging atmosphere began to do for the patient what she and others had not been able to do. True it is that she still possessed her gall-stones. True it is she still possessed a heart with myocardial changes due to stenosis of the valves. But neither of these conditions had anything to do with bringing about the mental state with its attendant somatic symptoms. Her inability to adjust herself to environmental change plus a natural tendency toward emotional instability brought about her unhappy mental state with its array of secondary physical symptoms. Several weeks ago the patient walked into my office. I scarcely recognized her, as I had not seen her for about two months. She had gained 35 pounds in weight, her mental and physical symptoms long since had disappeared, and once again she was radiating that atmosphere which comes from individuals who enjoy good health. Once more the philosophy of Weir Mitchell triumphed. Once again was health restored to one who otherwise would have succumbed to inanition directly brought about by an unstable emotional state.

Then how are these psychoneurotic patients to be diagnosed and treated as regards their symptoms? Obviously, this is an important question, and its answer depends a great deal on the mental acumen and professional finesse of the physician as he interrogates his patient. Without doubt, the treatment of a psychoneurotic patient begins with the taking of the history of his case. The old saying "First impres-

sions are the most lasting" is only too true These individuals, as a rule, start relating their complaints — almost in alphabetical order — in so persuasive a manner that they not only convince themselves, but ofttimes their physician as well, that they are suffering from some organic condition. Who among us has not listened at times to the "organ recital" of a patient as he methodically goes over his long list of complaints and then, for fear of overlooking a single one — like the sheep that strayed from the fold — pulls from his pocket a carefully written memorandum and minutely and meticulously scrutinizes it to see that nothing has been omitted. He is so anxious that his physician know all, see all, and hear all, that he has fortified himself to such an extent that no one could charge him with committing the sin of omission as far as the relating of his symptoms is concerned.

It is very necessary that a careful history of the somatic complaints of the individual be taken. Let him relate his symptoms in his own words. By no means should the interrogator ask leading questions. It is essential that all complaints should be obtained else, in the final analysis, a few of the blocks in the diagnostic jig-saw puzzle will be missing and the clinical picture be left incomplete. Likewise, the individual should be questioned concerning his social and cultural background. This is done for the reason that every individual is the product of the culture into which he is born and of the resulting environment in which he lives. Culture has its vices; it, also, has its advantages.

When it comes to the consideration of the subjective or personal aspect of the patient, the physician should be cognizant of the fact that the individual knows far more about himself, his manner of living, thinking, feeling, acting, of his past and present, than does the most astute and erudite medical scholar yet born. The mental autobiography of the patient is known only to himself. It is into this hidden treasure vault that the physician hopes to gain entrance. To ask for the key by which to gain direct entrance into this mental sanctum sanctorum is almost certain to bring denial to the physician and in most instances it will turn the patient against the one to whom he has come for help. To gain admission into so sacred a place requires great skill, tact and finesse on the part of the physician. It is a technique that, so far as I know, is not to be learned from text books. It is the ne plus ultra of the art of medicine. It is an accomplishment mastered by but few of our profession because it requires what the average physician is not willing to give; namely, time, patience and perseverance in the study of his patient and in the consideration of his manifold complaints.

After the history with all of its painstaking ramifications has been obtained, it is essential that a careful physical examination be made. It is unwise for the physician to do this in a prejudiced state of mind. To do so may lead him into great error. First, because the patient is convinced that he has some definite physical ailment. A cursory examination by no means would help to exterminate that idea from his mind. Second, because many an individual who had been judged a neurasthenic may be the beholder of some definite organic disease. The examiner never should lose sight of the fact that definite organic sickness may be grafted on a functional background. The ordinary routine examination of blood and urine, likewise, should supplement the examination. Other laboratory procedures, including X-ray, should be carried out when it appears that such are indicated. They are done that no doubt may remain in the mind of the patient that his physician has left no stone unturned to get at the bottom of his trouble.

With the history, physical findings and laboratory data before him, the physician is now prepared to talk over the problem with his patient. If no diseased condition has been found, ordinarily, the seance is a short one. In fact, the psychological reaction of the average patient is one of joy and relief when he is told that he has no serious ailment. But to the psychoneurotic person no such mental reaction occurs when he is informed that he is physically well. In fact, disgust, dissatisfaction, resentment, unbelief and even anger are apt to be manifested if the mentally ailing one is told he only imagines his symptoms. It is necessary, therefore, to get off to a correct start if a satisfactory finish is to be hoped for. The whole problem should be discussed frankly by patient and physician. This discussion usually brings out one important thing — namely, that the auto-diagnosis of the patient and the diagnosis of the physician

may be widely apart. It usually reveals the patient's attitude toward his own case, gives an insight into his emotional state and helps the physician to determine whether that attitude will be positive, passive or negative in carrying out the indicated treatment. There is the tendency on the part of the patient to translate every bodily feeling into physical terms and his symptoms, thus expressed, are in physical, rather than in mental, terms. Therefore, the best way to change the mind of such a patient is not to disagree with him. The old saying "a woman convinced against her will, is of the same opinion still," is apropos. The physician will find that it does not pay to deal with individual symptoms but rather to deal with general symptoms. He will find that the patient himself is his best therapeutic agent if he can but properly manage him without allowing him to know that he is being managed.

The patient is, in part, his own physician. To obtain any modicum of success in treatment, there must be team-work between patient and doctor. This is absolutely essential. Illness is an experience as well as an economic loss. This experience, which at times is a costly one, serves the patient in a two-fold manner: it impresses on his mind the financial loss to which he is subjected, and it helps him to understand himself better as his mental aberration is disclosed to him by his physician. With this disclosure there usually comes about an increase in self-confidence and, in knowing one's own mind, he applies the best therapeutic agent yet known to man, for the goal of psychotherapy is autotherapy.

GERMICIDAL PLASTICS

Perfection of self-sterilizing plastics that can be used for the production of food containers, drinking cups and similar utensils or as a durable antiseptic paint or varnish to coat other exposed surfaces is now reported from the Rare Metal Institute, California Institute of Technology.[1]

Extremely small quantities of ionized copper, silver or gold have remarkable germicidal powers. Silver was selected by the California metallurgists as most promising because of its relatively low toxicity and comparative cheapness. The feasibility of coating surfaces with metallic silver was first ruled out, since such surfaces are soon "disactivated" by the formation of surface films of protein or other germicidally inert compounds. In order to produce a surface not susceptible to this "disactivation," only a portion of the available silver ions should be present on the surface, with an abundant supply of reserve ions protected from deterioration but so located as to permit rapid surface replacement by outward diffusion. To accomplish this the reserve silver compounds should be incorporated in some plastic material having the desired rigidity and outward diffusion rate.

The only inexpensive durable substances with the required properties are certain organic resins or plastics currently used in the production of the newer varnishes or paints. Silver compounds can be incorporated in the unpolymerized resins or dissolved or dispersed in the solvent. The further incorporation of a neutral, opaque filling material is of advantage if the germicidal surface is to be exposed to light. The resulting mixture is a viscous fluid which can be applied by brush or by spray. The fluid hardens in situ by polymerization or evaporation, forming a surface that is tasteless, odorless and resistant to mechanical wear. The total quantity of silver which the material must contain varies with the intended use and desired degree of permanence. One Gm. of silver ions for 1,000 square centimeters of exposed surface is the heaviest type of varnish thus far developed.

The germicidal properties of such surfaces have been tested with a number of yeasts, molds and saprophytic bacteria. The test micro-organisms are suspended in distilled water, peptone water, sucrose solution, cider, milk or other desired medium, which is spread as a thin film over the test surface. At intervals samples of the film are removed by means of a sterile cotton swab, and the number of viable micro-organisms is determined by routine cultural methods. The germicidal efficiency of the surface is judged by the rate of decrease in the viable count. With the most efficient surface thus far prepared, 100 million of Escherichia coli per cubic centimeter of suspension fluid are killed in less than one minute. Other surfaces require five or more minutes for total sterilization.

1. Goetz, Alexander; Tracey, R., and Goety, S.: Science 95: 537 (May 22) 1942.

The rate of sterilization does not vary appreciably for the vegetative forms of different bacterial species. Spores, however, are less readily killed, B. subtilis spores, for example, suspended in cider or sugar peptonic solution requiring fifteen to thirty minutes for a 95 per cent reduction in viable count. Surfaces are not appreciably impaired by repeated washing, until the plastic layer is completely removed by mechanical wear.

Thus far acid fast bacteria and pathogenic viruses have not been tested with the new germicidal plastics. The plastic is readily applicable to metal, glass and wood surfaces or absorbed in paper or cloth. It is resistant to acids, alkalis and boiling water but may be readily removed by certain organic solvents. Its predicted effects in controlling microbic infections, however, have not yet been confirmed experimentally or statistically.

HOSPITALS TO BE REIMBURSED FOR CARE OF CIVILIAN CASUALTIES

Payment for temporary hospitalization of civilians injured as the result of enemy action has been made possible by a recent agreement between Administrator Paul V. McNutt of the Federal Security Agency and Director James M. Landis of the Office of Civilian Defense. The funds have been allocated to the U. S. Public Health Service by the Federal Security Administrator from funds made available to him from the President's emergency fund. A joint memorandum embodying the details of the program has been issued by Surgeon General Thomas Parran of the U. S. Public Health Service and Dr. George Baehr, Chief Medical Officer of the Office of Civilian Defense.

The plan provides that all hospitals caring for civilian casualties in the event of air raids or other enemy action will be reimbursed by the federal government at a rate of $3.75 a day. This is the rate of reimbursement established by the Federal Board of Hospitalization for federal beneficiaries in government hospitals and may be changed as conditions require, it was stated.

Any hospital in the nation, voluntary or governmental, may be used as a casualty receiving hospital in the Emergency Medical Service established by the Medical Division of the Office of Civilian Defense. In addition, certain hospitals and other institutions in "safe areas" may be used as emergency base hospitals for casualties or other patients whom it may be necessary to evacuate from urban hospitals in exposed areas. The new agreement provides that federally owned equipment may be loaned to the base hospitals and that their staffs will be supplemented by physicians of the region who will be commissioned in the reserve corps of the U. S. Public Health Service. It was emphasized that management and control of all hospitals, both local casualty receiving hospitals and emergency base hospitals, will remain the responsibility of the local or state authorities.

In the establishment of emergency base hospitals, emphasis will be placed on the relative safety of the area and the availability of existing hospitals and other institutions. Hospitals are now being surveyed for this purpose and will be classified on a basis of size, equipment and standards of operation.

It is proposed to begin immediately the organization of medical staffs for future base hospitals as hospital units affiliated with casualty hospitals similar to the affiliated general hospitals of the Army. The physicians, surgeons, specialists and dentists who are to be commissioned in the Public Health Service Reserve for service in these hospitals will receive rank, pay and allowance equivalent to those of the Medical Corps of the U. S. Army. They will be selected from older age groups, from physicians with disabilities that make them ineligible for military service, and from women physicians. As far as possible, they will be assigned to service in the regions in which they live. Because they are to function as balanced professional staffs, they will be recruited from the staffs of civilian hospitals and cleared through the Procurement and Assignment Service.

Regional Medical Officers of O. C. D. who are appointed in the Public Health Service will be the regional representatives of both agencies for this program. State Chiefs of Emergency Medical Service or their deputies may also be appointed consultants or commissioned in the Public Health Service in order that they may act as state representatives for the two agencies in the organization of emergency hospital facilities and the reimbursement of hospitals for the care of civilian casualties. In the more pop-

ulous coastal states a full-time State Hospital Officer may be needed, who will also be eligible for appointment in the Public Health Service.

Appointment of a state hospital officer as an official of Emergency Medical Service has been recommended by the Medical Division for densely populated states in the target areas. These areas are principally in the First, Second, Third, Fourth, Eighth and Ninth Defense Regions.

The principal function of the hospital officer will be the planning of emergency base hospitals for the reception of civilian casualties and other hospital evacuees. An official memorandum sets forth his duties as follows:

1. To survey the hospitals throughout the state (excluding those in the exposed cities) to determine how many beds can be put into immediate use in emergency with existing kitchen, laundry, sanitation and other engineering facilities:
   (a) By clearing patients to their homes
   (b) By restricting admissions
   (c) By use of rooms not normally used for patients
   (d) By rehousing medical and nursing staff and other hospital personnel outside the hospital
   (e) By use of neighboring buildings (schools, hotels, etc.), for patients (or staff)
   (f) By extra bed accommodation in temporary structures erected on available grounds adjacent to the hospital.

2. To assist in designating for each casualty hospital or group of hospitals in each exposed city:
   (a) The line of evacuation to the base
   (b) The transport arrangement
   (c) The emergency base hospitals provisionally allotted to each casualty unit.

3. To keep constantly informed of the bed state of every hospital in his area by weekly returns.

4. To advise the Office of Civilian Defense, through the Regional Medical Officer, on the need for providing additional accommodations, e.g., by temporary construction or by converting convalescent homes, hotels, school dormitories or other structures into hospitals.

5. To report to the Regional Medical Officer of the Office of Civilian Defense any exceptional conditions requiring action (e.g., beyond state boundaries, or required by the need of the military situation) and to forward to him copies of a monthly summary report on the state's emergency hospital program. Where a hospital outside a state boundary is readily accessible for the reception of casualties from an exposed city, this fact should also be noted.

6. To maintain constant touch with the other service departments of the State Defense Council (e.g., evacuation, etc.).

7. To supervise the distribution of medical and hospital supplies under the direction of the State Civilian Defense Property Officer and report any threatened deficiency to the Regional Medical Officer.

8. To supervise staff arrangements for emergency base hospitals and for reception areas.

9. To control movements of medical and nursing staff, as well as of casualties in any situation affecting emergency base hospitals.

The hospital officer must work in close collaboration with the state evacuation authority, the memorandum points out. In addition, he may find it necessary to collaborate with the state officer in charge of institutions for the care of mental patients, if such hospitals are to be used as emergency base hospitals for the reception of casualties and other patients evacuated from urban hospitals. Transport arrangements are to be handled in collaboration with the evacuation authorities of the state and the military authorities of the area.

TESTS FOR SYPHILIS IN PREGNANT WOMEN

Through the cooperation of the physicians in New York City, voluntary and municipal hospitals and the Bureaus of Vital Records and Statistics, Child Hygiene, Health Education and Social Hygiene of the Department of Health of the City of New York, a study was made of the serological tests for the mother during pregnancy. In the latter half of 1940, with the cooperation of the Bureau of Vital Records and Statistics, transcripts of birth certificates indicating a positive serological test for syphilis in the mother during her pregnancy, or bearing no information concerning such test, were assigned for follow-up in the Bureau of Social Hygiene. The hospital or physician concerned in the delivery was asked to supply pertinent

epidemiological information. The experience of the past twelve months indicates that in 1941 about three to four percent of the pregnant women in New York City reached the time of delivery without having blood test for syphilis during the pregnancy. Physicians in practice explain their lapse in this regard by recording refusal of the pregnant woman to submit to venipuncture, by inability to secure blood through small veins, by negative serology at premarital test or previous pregnancy, and by emergency delivery. Institutions ordinarily state that no blood test for syphilis was done because the delivery was an emergency, the pregnant woman having had no prenatal treatment at the hospital reporting the delivery.

During 1941, the total number of births reported were 114,368 live and 8,975 still births and abortions. A total of 4,380 of these births were investigated by medical epidemiologists of the Health Department: 801 because of positive prenatal serology and 3,579 because no serology was reported.

Reasons were obtained for not reporting serology in 2,325 births. In 170 cases, no reply could be elicited from the physician or institution reporting the birth. In the balance of 1,084 births, 1,049 were negative and thirty-five positive.

A LAST PAGE LYRIC

Picked by A. H. O. from the Indianapolis Star

By Mary E. Bostwick

(Persons violently allergic to all forms of exercise will be glad to hear that Dr. Fishbein, American Medical Association Journal editor, says nobody ought to "lift a finger unnecessarily" after 40.)

Oh, when it comes to exercise a lot of us, we've found,
Have spent our lives in dodging schemes to make us stir around—
And we were right as right coud be, and now we're justified,
For Dr. Fishbein, A.M.A., is backing up our side.
This Dr. Fishbein is a man we like extraordinarily—
"If past your youth," he says, "Don't make a move unnecessarily!"
Oh, that's the way we've always done, and how our friends deplored it!
We'd find ourselves a rocking chair, and firmly stay aboard it.
"Come take a golf ball, dear" they'd say. "And smack it from a tee—
You ought to get some exercise" and we'd reply, "Who? Me?"
They'd say, "I'll teach you tennis, dear, I know you'll simply love it.
You'll put on weight if thus you loaf," and we'd reply, "What of it,"
They'd say, "The air is bracing, dear—come out and take a hike—
Come out and ski or bowl or skate or pedal on a bike—
Put on your bathing suit and come and gambol on the shore—
Come out and climb an Alp or two"—and we'd reply, "What for?"
And they would say, "Alackaday—you cause us great distress—
Do you prefer to loaf through life?" and we would answer, "Yes!"
Good Dr. Fishbein, you're okay—we wish you lived our street up—
We'll keep on doing as you say, and putting both our feet up.

J. A. M. A.

LET'S FINISH THE JOB

They have taken away the lapels from our coats,
Have forbidden the cuffs on our pants;
So with cotton and shoddy
We must cover our body,
As patch pockets are looked at askance.

But why should they stop at a job partly done?
They should put a harsh ban on a vest,
And eliminate ties
And reduce excess size
Of our top-coats and pants and the rest.

And just why should a raincoat be burdened with sleeves,
Or a shirt have a collar or tail?
Let's make hats taboo
When an eye shade will do
And forbid shorts and sox for the male.

Why not one great big pocket instead of fourteen?

We could do without shoes and not grieve;
If wearing less clothes will help us win
We will gladly go back to leopard skin
Or will dress in a fig leaf like Eve.

GERIATRIC JOCULARITIES

A keen and cultured little lady admitted that she was "past eighty."

One day I found her definitely petulant because of shortness of breath and some oedema of the ankles.

She seemed somewhat appeased when I explained to her as patiently as possible that all this came from a tired heart and that, after all, this heart had been a most faithful organ, beating away at an average rate of more than seventy times every minute of every hour for as many years as she had lived.

On seeing her a few days later her bed table was a litter of papers covered with figures.

I asked what she had been doing.

She replied, "I have computed the number of times my heart has beat during the years I have lived. You see I never have told people my age. I have told them that I am about eighty. Actually I am past eighty-eight and hereafter I shall say so. If I say eighty I am not fair to this faithful heart of mine for in those extra years it has beat 294,336,000 times for me and I would be an ungrateful old woman if I did not give the credit due it."

"Furthermore," said she, "during the eighty-eight years, six months and four days that I have lived by heart has worked for me 3,256,495,200 times. Something to be proud of, don't you think? At any rate I shall never again complain of it."

A reasonably safe wager would be that one could approach any college president in the United States, and, with a minimum of sales talk, sell him a fistful of Christmas Seals. The hitch comes when we try to sell many of these leaders the very program their own money has gone to support. It is to be feared that sometimes we contribute to worthy causes in order to be spared further thought about them or contact with their unpleasant realities. Too many college administrators, even in these enlightened days, refuse to admit the necessity for early diagnosis among their own students, though they will give generously to an agency whose chief concern is early diagnosis for all who need it. Charles A. Lyght, M.D., Journal-Lancet, Apr. 1942.

The tuberculin test should be a part of the preschool examination. Tuberculosis seldom develops in its clinically serious forms in children but they are easily infected with the germs of the disease, which may remain dormant until they reach the teen age or early adult life, and then cause trouble. Through the tuberculin test it is possible to determine whether or not a child has been infected. When the test is positive every effort should be made to find the source of infection and to protect the child from further exposure to the disease. It is important to point out here that precaution should be taken to make sure that maids and other household employees are free from tuberculosis by having them tuberculin tested and X-rayed if positive to the test. Chester A. Stewart, M.D., Louisiana News in Brief, Sept.-Oct., 1941.

Tuberculosis is the remaining arch-foe of childhood, harbored unwittingly by many adult associates and calling for special attack, although the principles applicable to its control are identical in the main with those pertaining to contact infections in general. Wisc. Assn. for the Disabled, June, 1942.

Boys and girls in secondary schools, technical schools, colleges and universities are at a period of life where physical and mental strain is great, and the risk of tuberculosis serious. The disease at these age periods shows a tendency to increase. Regular X-ray examinations are advisable. Doctors responsible for the health of such institutions are asked to encourage their wider use. Policy of National Assn. for Prev. of Tuber. (England). Tubercle, Feb., 1942.

Primary tuberculosis in adults is not, as is frequently assumed, a benign disease. P. Bernoulli, Schweiz. med. Wchnschr. Sept., 1940.

Give me health and a day and I will make the pomp of emperors ridiculous.

Ralph Waldo Emerson

Industrial workers are as much a part of an all-out war effort as are the men in uniform, since twelve men are needed in the factory to keep one man in the field and loss of working time is as serious as the loss of a battle. Tuberculosis is two and a half times as great in industry as in the general population. It thus becomes the serious responsibility of the industrial medical officer to protect such workers by case-finding surveys, and the control of tuberculosis is an important phase of industrial hygiene. G. J. Wherrett, M.D., Canadian Pub. Health Jour., Sept. 1942.

Tuberculosis — an age-old enemy of mankind, and a reliable index of physiological social, and economic well-being. K. F. Maxcy, M.D., Amer. Jour. of Pub. Health, Oct., 1942.

Clinicopathologic Conferences

J. J. Moore, M.D., Department Editor.

PRESENTATION OF CASES BY
WALTER SCHILLER, M. D.
Cook County Hospital
CHICAGO

CASE 1 — INTUSSUSCEPTION OF THE TERMINAL ILEUM

History — This 70 year old colored female was admitted to the Cook County Hospital on September 2, 1942 with a history of being well until two weeks ago when she began to vomit a few minutes after every meal with continuous nausea. At the same time she developed pain around the umbilicus radiating to the epigastrium. and occurring especially during vomiting. She had lost about 35 lbs. of weight during the last 6-12 months. She has always had one bowel movement in two days.

Patient had similar complaints before 1936, but refused to be operated on. In 1936, she was operated at the Cook County Hospital "because her bowels were locked."

Physical Examination revealed a poorly nourished colored female. B. P. 198/114; Pulse 88; Respiration 24. Pupils reacted to light and accommodation. Teeth carious. Heart was within normal limits. Normal rhythm, with a soft systolic murmur at the apex. There was a suggestion of a small soft movable mass in the right lower quadrant with an old right perirectus scar. Over the labia majora was a small pedunculated polyp.

An emergency x-ray showed a typical ladder-paralleling of the intestines. At times no peristaltic sounds were heard, at other times peristaltic rushes were heard. Routine oil enemas came through in 6 hours.

The diagnosis was an incomplete small bowel obstruction on basis of adhesions. During her stay in the hospital, her temperature was normal. At times she would vomit. A slight abdominal distension would come and go.

The only time she complained of pain was on the day she expired, at which time the patient asked to be taken "upstairs" for surgery. The pulse became weak and thready. The abdomen became somewhat rigid and tender with hyperperistalsis. A surgical consultation diagnosed "not obstructed", and patient expired on the same day, 14 days after admission.

Autopsy — The body is that of a well developed, well nourished colored female. There is no pitting edema. The abdomen is retracted and shows to the right of the umbilicus a paramedian linear scar of 12 cm. in length. On opening the abdomen, the omentum is found adherent to the lower ileum, the latter being covered by adhesions and matted to some higher intestinal loops and to the peritoneum of the anterior wall. The rest of peritoneal serosa is smooth and the cavity free. The adhesions around the ileum are dark purple red and give the impression of consisting mostly of blood about to be organized. The appendix is normal and gives no evidence of inflammation. The terminal ileum is markedly distended and is almost as large as the cecum. Its serosa is dark red and covered with soft, fibrinous precipitations. On opening, the terminal ileum shows an invagination or intussusception of 6 cm. length and 5 cm. in diameter which has resulted not only in the distension of the terminal ileum but also of the ileo-cecal valve which, since the







Photos of Figures 1, 3, 4, by courtesy of Dr. E. M. Kurth, Chicago

Case 1—Figure 1

Intussusception of the terminal ileum. A probe has been passed through the lumen of the invaginated part, which is not much wider than the diameter of the probe.

The end of the invaginated part under higher power with the polyp A next to end of the probe.

Uterus with cervical polyp A and endometrial polyp B.

lumens of the ileum and cecum are almost equal, appears from the mucosal side as a low, slightly-projecting fold.

The mucosa of the invaginated part as well as the outside layer of ileum is dark purple red and finally granular by necrosis and hemorrhagic inhibition. From the end of the intussusceptedpart projects a mushy, purple red polyp 30 x 21 x 30 mm. The part of the ileum proximal to the intussusception is dilated to almost the size of the lumen of the cecum. Its wall shows a marked hypertrophy of the muscularis and a progressive edema of the mucosa which is discolored dark grey. The lumen is stuffed by abundant masses of soft, pasty yellow contents.

The intussuscepted part proves to be able to admit a probe of no more than 4 mm. in diameter. The above mentioned adhesions are arranged around the terminal ileum and have no direct relation to the abdominal scar.

The examination of the other organs reveals a polyposis of the rectum, progressive parenchymatous degeneration of the liver and the kidneys and a mild chronic ascending pyelonephritis.

There is a bilateral peri-oophoritis and salpingitis with a left hydrosalpinx. On opening the uterus, which is disfigured by several submucous and subserous fibroids, a pedunculated cervical and two hemorrhagic endometrial polyps become visible. Both ovaries are moderately enlarged. The surface layer is white, hard, homogeneous, and shows on transverse cut, small, cystic inclusions with smooth lining and serous fluid in the lumens. Numerous pin-head and pea-sized, white, firm polypoid nodes project over the surface.

Microscopic: The intussuscepted ileum shows necrosis and hemorrhagic inhibition of the mucosa. The ovaries have on the surface a papillary adenofibroma with cystic inclusions. The stroma consists of dense fibrous connective tissue, poor in cells with a tendency to hyaline degeneration. The epithelium of the surface projections and of the cysts is low columnar to cuboidal with large, deep-staining nuclei.

Discussion: Many points of the history seem to confirm the diagnosis, which was raised several times, of a malignancy of the large bowel. Constipation, blood in the feces and loss of weight of 35 lbs. during the last year, fit very well to the suggestion of a carcinoma of the sigmoid or, maybe, of the descending colon.

Once a mass was palpated in the left lower quadrant. The fact that in the last time, the mass seemed to be in the midline, or even to the right side of it, could be explained by a distended sigmoid, or a somewhat mobile ascending colon.

The hypertension, which was confirmed by repeated examination, appears to be an incidental finding having no relation to the intestinal pathology. But, there are several findings which do not fit in this picture. On one of the last days, an intern palpated a mass in the cecum, which was too far to the right side for a malignancy of the sigmoid or the rectum. Further, the various signs which indicate an obstruction of the small intestines, as paralleling of the small

bowel on x-ray, vomiting, etc. are very rarely found in constructing carcinomas of the large bowel which, by its large lumen and its distensibility to a high degree can compensate for an obstruction, thus, preserving, to a certain degree, the small intestines from the deleterions effect of a stasis of the contents. And finally, eight years ago, in 1936, she had a similar attack which, after a few weeks, cleared up completely. An obstructing carcinoma of the large bowel, which has caused an obstruction of the lumen may give way again by necrosis of the parts which project in the lumen. But the improvement of the patient's condition will not last longer than a few weeks.

An interval of improvement and latency of eight years is not likely in a large bowel malignancy, in which ordinarily the patient succumbs the latest 3-4 years after the appearance of the symptoms. Intervals of 3-4 years one may only expect in radical operations in the early phase of a malignancy when the patient succumbs to recurrence or metastases. But in a case which already has caused severe changes and has not been operated on, six years of latency and improvement make such a diagnosis most unlikely.

A second diagnosis raised was a terminal ileitis. But this disease in general causes an obstruction only rarely. Here similarly, the long latency, and sudden onset of the attacks makes the diagnosis doubtful. It has to be admitted that intussusceptions of the type encountered in this case are very rare.

75% of all intussusceptions occur during the first year of life and of these 70% occur in males. Our case concerns a 70 year old woman. The cause of intussusception, in the overwhelming majority is a deficient coordination of peristalsis, sometimes occurring during agony. Only a minority of cases is due to polyps which interfere with the waves of peristaltic contraction and dilatation. Our case, again, belongs to this minority as regards to the etiology. The cause of the intussusception evidently was the polyp. The latter probably was not as large as we found it at the autopsy. Edema and hemorrhage may have enlarged it 2-3 times its previous dimensions. In general, polyps of the ileum are rare. Polyps of the duodenum and stomach are more frequent, not to speak of polyps of the rectum.

This patient had a general and evidently constitutional tendency for polyps, having developed a polyposis of the rectum, left labia majora, cervix and endometrium and the polypoid cystofibroma of both ovaries. Evidently, the polyp of the ileum six years ago had caused an invagination which was reduced spontaneously after a short while. She had, as the history claims, a previous laporatomy about which we could get no information.

The autopsy showed a simple scar of the abdominal wall without intraperitoneal evidence of any surgery. It is possible that she had an attack previous to the attack six years ago, and the surgeon operated on her with the diagnosis of acute appendicitis and closed the abdominal wall without doing any further surgery after he found the appendix perfectly normal.

This unsuccessful attempt may have discouraged the patient to agree to an operation when she had another attack six years ago. She was right, that attack also ended by spontaneous reduction.

However, the last episode proved fatal.

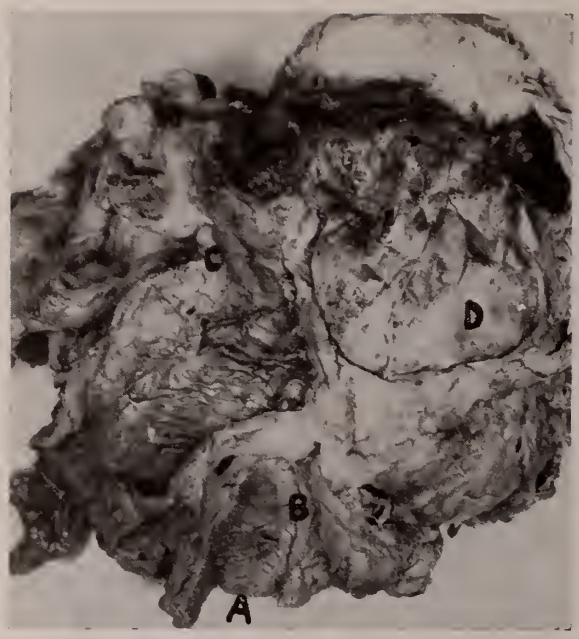
CASE 2 — KRUKENBERG TUMOR

History: — The patient was a 49 year old negro woman weighing 225 lbs., who had noticed a rapidly growing mass in her abdomen for the last 4 months. There had been quite a bit of pain associated with it. She also had pains in the right upper quadrant radiating to the back. In 1922 she was operated on and a fibroid uterus, the appendix and the cystic half of the left ovary were removed. This was done because she complained of vaginal bleeding. After this operation, she became progressively more and more constipated. For the last 5 years, she took 2-3 enemas a day. In the last month, she lost 20 lbs. and developed a nocturia of 4-5 times.

Her mother died of carcinoma of the breast.

Her sister has had a "tumor" of the pelvic organs.

On physical examination her B. P. was 140/90, mouth was edentulous, heart and lungs were normal. The abdomen was distended by a large indurated mass arising out of the pelvis and extending above the umbilicus. It was dull on percussion and moderately tender. Bowel sounds were normal. A diagnosis of an ovarian tumor was made which pressed on the colon producing obstruction. She was treated conserv-



Case 2—Figure 2.—Genitalia and rectum opened from the posterior side. A—Vagina, B—Cervix, C—Constricting carcinoma of the recto-sigmoid junction, D—Ovarian tumor attached to the rectum and sigmoid.

atively. An x-ray showed a constriction of the rectosigmoid. About a week after admission, the abdomen became more distended, and she became weak and cyanotic. The patient did not have a bowel movement during her stay in the hospital. While surgery was being contemplated, she suddenly went into circulatory collapse and expired 8 days after admission.

Autopsy: — The body is that of a well developed white female weighing 225 lbs. There is no pitting edema. Abdomen is distended, its level is 3 fingers above the thorax and shows an old, flat midline scar extending from 4 cm. below the naval to the symphysis. The face, neck, finger nails and toe nails are deeply cyanotic. On opening the abdominal cavity, the peritoneum of the upper two quadrants is glistening and normal and the organs free. In the lower two quadrants, the intestinal serosa is discolored, grayish brown. The intestines are matted together to a great extent by soft, dirty gray fibrinous masses and are adherent to the anterior abdominal wall. Some of the spaces between the intestines are filled with a dark brown turbid fluid. The major part of the right lower quadrant and the pelvis is occupied by a large multilocular cystic tumor, evidently of ovarian origin, the size of a man's head. Some of the cystic cavities have ruptured spilling their contents into the peritoneal cavity and causing adhesions. On transverse cut, the tumor shows numerous cavities of different shape and size, some round, others are flattened and compressed. The septa are thin and the contents are serous to mucinous and varying from a light yellow to a dark brown hemorrhagic color. The inside of the cavities is smooth and papillomatous projections can nowhere be found.

The right pleural cavity is free, the left contains a few cc. of a slightly turbid brownish fluid. The pericardial sac contains a few cc. of a clear colorless fluid. The heart weighs 390 gms. and is well contracted. The valves, the coronaries, the pulmonary artery and aorta are all normal. The lungs are slightly emphysematous. The lower lobes are moderately compressed by an elevated diaphragm.

The stomach has a pale mucosa and presents at the pylorus a few small shallow superficial erosions.

The spleen weighs 140 gms. and is moderately firm. The liver weighs 2400 gms. and is of firm consistency. On the upper part of the right lobe of the liver, several white, firm, umbilicated, flat nodes project slightly over the surface. On transverse cut, they are white and solid, sharply demarcated and the largest has a diameter of 45 mm. The gall bladder, pancreas, small intestines and adrenals present no pathological changes.

The kidneys weigh 290 gms. The capsule strips with ease, leaving a gray tan, smooth surface. On cut surface, it shows no pathological changes. The urinary bladder contains a few cc. of a thick, greenish urine. The posterior part, up to the trigone, is slightly elevated by the ovarian tumor to which the bladder is adherent and in this part the mucosa shows large, elevated blebs of edema.

The rectum is collapsed with smooth mucosa and low folds. 15 cm. above the anus, at the recto-sigmoid junction, the lumen is reduced and the wall thickened by a circular carcinoma of 4 cm. in length. Corresponding to the carcinoma, the serosa is firmly adherent to the ovarian tumor. The vagina has a granular, gray mucosa and ends in a short cervical stump.

Microscopically: — The carcinoma of the sigmoid shows a superficial ulceration of the mucosa. The submucosa, muscularis and serosa are invaded by an adenocarcinoma of high maturity. It is formed by irregularly shaped glandular and cystic cavities lined by a low columnar epithelium with pale staining protoplasm and small basal nuclei. This carcinoma forms in addition to the adeno-cystic cavities, to a small extend, solid masses, but invasion by single cells is very rare. The deposits in the liver and in the ovarian tumor duplicate the histological picture of the intestinal tumor. In the septa which separate the ovarian cavities, a marked reactive proliferation of the edematous and inflamed stroma can be seen.

Discussion: — The signs and symptoms of this case can be divided into two groups. First, she developed a large tumor which extended by rapidly growing during the last two months, filled the right lower quadrant, and extended to the left lower and eventually to the right upper quadrants. Since during the first operation, only part of the left ovary was removed, with great probability, the tumor can be traced back to the ovaries and a diagnosis of ovarian carcinoma can be made. This diagnosis gets further probability by her family history, viz., her mother and sister having died of carcinoma.

The loss of 20 lbs. in 1 month also speaks for a malignancy. On the other hand, she suffered with constipation, could not retain enemas, and although no obstruction could be proved, a mass was found in the rectum.

This second group of clinical findings, points to pathology of the large bowel, probably of the rectum. Since two primary malignancies are exceedingly rare, the suggestion gains ground that one malignancy is the primary and the second a deposit by extension, since the left ovary and rectum are close together. Simple adhesions of an ovarian tumor with the rectum, would hardly explain the palpable mass in the rectum. A primary ovarian carcinoma usually has less tendency to invade the neighboring organs than to spread over the peritoneum by causing a peritoneal carcinosis with ascites. This was not found in our case, and so the diagnosis of a carcinoma of the large bowel with extensive deposits to the ovary could have been obvious.



Case 2—Figure 3—Cut surface of the multilocular cystic ovarian tumor.

Ovarian deposits of intestinal carcinomas, by tradition, are called Krukenberg tumors, although, the credit for having discovered these tumors should be given to Marchand who was Krukenberg's superior. The majority of these tumors develops from a primary carcinoma of the stomach, but Krukenberg tumors secondary to carcinoma of the large bowel are not too rare. It is an old rule of clinical gynecology, when a patient is suspected of an intestinal carcinoma, the ovaries should be examined, and vice versa; women suspected of an ovarian carcinoma should be checked for intestinal carcinomas. The strict following of this rule has proved very helpful for the discovery of numerous unexpected intestinal and ovarian carcinomas.

Even if the suspicion is raised only during the operation, the examination of the intestines and ovaries should not be omitted for the benefit of the patient.

In a case Amreich had operated on, the diagnosis of a left ovarian cystoma was made. During the operation it was diagnosed a Krukenberg tumor and a careful examination of the intestines revealed a circular non-constricting carcinoma of the sigmoid. A few days after the successful removal of the Krukenberg tumor together with the uterus and opposite adnexa, a carcinoma of the sigmoid was successfully operated on.

CASE 3 — FETAL HEMORRHAGE FROM A VARICOSE VEIN OF THE OMENTUM

History: — The patient was a 52 year old negro woman who entered the Cook County Hospital on 9-19-42, stating that for the past 2 years she has been having swelling of the abdomen, eyelids, puffiness of the face and swelling of the legs. These symptoms became worse since 8 months ago, when she also developed marked weakness, anorrhexia and vomiting. At times, she would get pain across the abdomen and marked dyspnea on exertion. Lately she urinated twice daily and very little at a time. In 1921 she was operated for a rupture. Her menopause was 2 years ago. She had one child and one miscarriage.

On physical examination she appeared rather lethargic and very ill with a marked generalized anasarca. The heart was enlarged to the left with an accentuated second aortic sound. Rate was rapid; no murmurs. B. P. 160/100. Both lower pulmonary lobes showed dullness, decreased vocal and tactile fremitus with moist rales. The abdomen was distended with fluid, not rigid, and the umbilicus was everted. There was a large movable mass occupying the lower 1/3 of the abdomen. Bowel sounds were normal and the liver was slightly down. On rectal examination there was no blood nor feces. On bimanual examination, the large abdominal mass moved with the cervix. The diagnosis was active nephritis, superimposed on a chronic glomerulonephritis with uterine fibroids.

The N. P. N. was 94, creatinine 7.5. The urine showed a 4 plus albumin and many R. B. C. and pus cells. Blood count was 2,000,000 R.B.C. and Hb. 37% on admission. Chlorides 475. Wassermann negative.

Patient was treated conservatively and expired 4 days after admission.

Autopsy: — The body is that of a well developed, well nourished colored female with progressive chronic edema of both legs as evidenced by thickening and scaling of the skin. There is marked edema over the lower back. The neck and the face, especially the eye-lids, appear puffed and swollen. The abdomen is distended with fluid and extends 2 fingers above the level of the chest. The umbilicus presents a slightly projecting thinned hernia of 5 cm. in diameter. In the right lower quadrant, an old appendectomy scar can be seen. On opening the abdominal cavity, it presents an ascites of 2000 cc. of a dark purple-red, hemorrhagic fluid free from clots. Only in the pouch of Douglas were found a few soft, dark red blood clots the size of walnuts and weighing 250 gms. The large omentum forms the contents of the umbilical hernia, where its peripheral end is loosely adherent to the hernial sac. From here distended varicose veins can be seen running to the pyloric end of the greater curvature of the stomach. Some of these veins are partially blocked by thrombi and one varix 5 cm. below the greater curvature, shows a little opening from which blood oozes on pressure.

The fixed part of the omentum is kinked and stretched by a stony hard subserous fibroid which projects over the uterine fundus. The peritoneum is smooth and glistening and the intestines and stomach distended by gas. The left pleural cavity contains 200 cc., the right 500 cc. of a clear, yellowish fluid. The pericardial sac contains 30 cc. of a similar fluid.

The heart weighs 260 gms. and is well contracted. Both ventricles contain only a few drops of blood; the blood clots which are usually found are missing. The valves and coronary arteries are normal. The aorta shows plaques of fatty degeneration of the descending part. The lower lobes of both lungs are slightly compressed and atelectatic. The liver weighs 1250 gms. is soft and shows a light gray yellow color due to fatty degeneration.

The kidneys weigh 320 gms. together; the consistency is soft and the capsule strips with ease leaving a light gray, slightly irregularly granular surface with numerous pin point sized hematomas. On cut surface, the markings are indistinct.

The uterus is deformed by numerous intramural and subserous hard white fibroids, the largest of which has a diameter of 12 cm. The ovaries correspond to the age of the patient.

Microscopic: — The liver shows progressed fatty degeneration located in the periphery of the acini. In the kidneys, many glomeruli are obliterated, some by proliferation of Bowman's epithelium, some by a thickening of the fibrous part of the capsule. Corresponding to the degeneration of the glomeruli, the tubuli of



Case 3—Figure 4.—Omemtum with dilated and tortuous veins. A probe has been passed through the gap of the burst varix.

many nephrons are collapsed and the interstitial tissue shows compensatory proliferation with dense inflammatory infiltration.

The tubuli of some functioning glomeruli are dilated by compensatory hyperfunction and project over the surface thus producing grossly small gray granuli. Some of them are stuffed with R. B. C. giving origin to the "flea-bites" representing remnants of a hemorrhagic glomerulitis. The vessels, particularly the small arterioles are in good condition.

Discussion: — The history and the laboratory findings of this case give a clear and rather typical picture of a glomerulonephritis which started 2 years ago acutely with edema and vomiting, albuminuria, hematuria, and in the course of the past 2 years showed the tendency to become chronic. Such cases are not too frequent. 15 to 20 years ago, we saw a great number of cases of typical acute and chronic glomerulonephritis and the nephrosclerosis played a minor role. The text books published at that time dealt extensively with glomerulonephritis and spent only a few lines in italics or as a foot-note for the nephrosclerosis.

This picture has changed entirely. We see nowadays many more cases of nephrosclerosis and only a few cases of glomerulonephritis, a great number of them in children after scarlet fever. This case is one of the rare, typical ones in adult people. All the clinical findings collaborated it and the microscopical picture of the kidneys verified it. There is only one laboratory finding which, even though it fits the picture, exceeds in intensity what we commonly see in such cases, viz., the anemia.

Hemoglobin of 37% and red blood corpuscles of 2,000,000 is much less than we would expect to find in an adult person with a subacute or almost chronic case. In children we may find it when the hematuria is a very heavy one and the nephritis is fulminating. In an adult an anemia of so high a degree should be explained by an additional cause. Unfortunately, the patient was never tapped. If this were done, the hemoperitoneum would have been discovered. Evidently, the oozing of blood from the ruptured vein started some time ago. The opening of the varix was very small and partially occluded by a thrombus, so that the blood could leak drop by drop. Second, there was a complete hemolysis, with the exception of a few small clots in the cul-de-sac. It takes a long time for the red blood corpuscles to become dissolved if suspended in ascitic fluid, since it is isotonic and the contained protein serves as further protection. Evidently, it took a very long time until so large a quantity of blood left the distended vein and became dissolved in the preformed ascites. For the varicosities of the omental veins, we can find two reasons. First, the omentum was adherent to the umbilical herna and thus became elongated by the tension. Second, it was stretched and kinked over the subserous fibroid which projected over the fundus. The stasis and the compression might have contributed to the varicosities and the thrombosis. The rupture might have been caused by some accidental trauma, viz. a fall or a kick.

Physiologically, the omental veins, which open into the gastroepiploic vein, a tributary of the portal, play no great role. Clinically and surgically, they are used to establish an artificial round-about way for the portal blood in cases of cirrhosis. The operation, which bears the name of Talma, and is called lomphalopexia, consists of establishing an artificial anostomosis between the veins of the abdominal wall which

radiate from the umbilicus and if distended form the caput medusa, and the omental veins.

It is said that Talma suggested this operation after he observed a case of cirrhosis in which this anastamosis had been established by an umbilical hernia which became adherent by firm adhesions with the omentum.

In our case, the adhesions between omentum and hernial sac were only superficial and could be easily separated. If the adhesions were firm, an anastomosis would have been formed, preventing congestion, varicosity and rupture.

THE THERAPEUTIC VALUE OF PUPPETS

The educational value of puppetry is less well known than its entertainment and commercial values, says an article by Jeanetta Lyle and Sophie B. Holly, R.N., in the *Bulletin of the Menninger Clinic.* Puppets have long been used in schools, however, where they lend themselves ideally to the teaching of such subjects as geography, history, home decoration, dress design, stagecraft, and dramatics. Their therapeutic possibilities in a program of *re-education* of the mentally ill have been recognized comparatively recently. Child therapy has utilized them most effectively in attempts to learn more about the nature of the child's conflicts which, with his limited vocabulary, he is unable to express adequately in words but can express in play with dolls and toys. A number of reports of this type of work with maladjusted children under the guidance of child analysts have been published.

The reaction of adult patients who may also be unable to express their conflicts verbally because of regression and strong inhibitions to puppet making and use has been less adequately studied, although some observations have been made. This method of recreation in a hospital is prescribed as is any other activity, mental or physical, for the purpose of contributing to lasting recovery from disease. It serves the therapeutist as a means of investigating the patient's difficulties and of helping him to solve them, and it helps the patient to dramatize his fantasies in a creative way. It leads almost inevitably to some kind of social relationship, because wherever there is a dramatic representation there most be an audience, even if it is only one person.

One of the best things about puppetry as a therapy is that it is so versatile. A puppet may play many roles, not only on the stage, but in the treatment of patients. For one person, the building of a being who walks and talks may satisfy a deep creative urge; for another, the complete control that he gains of the puppet's mechanism may expand his ego by giving him a sense of mastery; for another, the antics of the puppet may express the exhibitionistic strivings that he cannot give vent to himself: and for another, the puppet may become an agent through which he can express inhibited agressiveness . . . . .

Sometimes a patient identifies himself with his puppet and cannot be parted from it, taking it to his room and even taking it home with him when he leaves the hospital. The puppet to him takes on a personality, just as Charlie McCarthy has developed an individuality for the radio public that is more real than that of many human performers. One young schizophrenic boy modeled a puppet that looked a little like himself. This puppet first played the part of Jack in *Jack, the Giant Killer,* and later appeared as Gluck in *The King of the Golden River.* Because of his ingenious expression and the hero parts which he played, he soon became the favorite of all the patients and his "master" enjoyed the reflected glory. He enjoyed playing with "Gluck," had him outfitted with a new suit in the women's occupational therapy department, and took the puppet home with him when re recovered sufficiently to leave the hospital, much to the regret of some of the other patients who had also grown fond of the little mannequin. It was quite evident in this case that the success of the puppet brought to this youth the renewed hope and interest in life that a human friend sometimes gives.

One rather touching example of this close identification with a puppet was shown in a presentation of Robinson Crusoe. A depressed schizophrenic man who was manipulating the puppet who took the part of Friday came to the lines where Friday begs Crusoe not to leave him behind on the island. Standing on the bridge over the miniature stage, the patient forgot all about pulling the strings of the puppet and turning to the therapeutist with tears streaming down his cheeks, he recited the passionate plea not to be left alone directly to the therapeutist.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

Milton H. Bohrod, formerly of Peoria, has been appointed pathologist of Rochester General Hospital, Rochester, New York.

J. A. Fisher of Metropolis was recently elected President of the Southern Illinois Medical Association. W. I. Lewis of Herrin was re-elected secretary-treasurer and C. D. Nobles of Anna was names assistant secretary-treasurer.

Among the speakers appearing before the Twelfth Annual Conference of the Oklahoma City Clinical Society on October 26th and 27th were Frederick H. Falls, Frank J. Novak, Jr. and Willard O. Thompson, all of Chicago.

I. J. Goodman of Loda, a member of the Illinois State Medical Society, awaiting commission in the Army Medical Corps, was killed in an automobile accident on August 16, 1942.

Walter Stevenson of Quincy, was awarded the Mississippi Valley Medical Society Distinguished Service Award for 1942 at the Banquet on the occasion of the Eighth Annual Meeting of the Society, held at Quincy on October 1st.

The December 16th meeting of the DuPage County Medical Society will be held at the Zace Sanatarium, Hinsdale, on the evening of December 16th. A tour of the Sanatarium will be made by the visiting doctors under the direction of Dr. Webb.

Harlan English has been invited to address the Crawford County Medical Society at the Woodworth Hotel, Robinson on December 10th.

Will-Grundy County Medical Society meets for luncheon every Friday noon at the Louis Joliet Hotel, Joliet. Excellent speakers discuss subjects of current interest. All doctors are cordially invited to attend these meetings.

Herbert E. Landis address the McLean County Medical Society at Bloomington on "Hematuria," November 17th.

A combined lecture and demonstration course in Occupational Dermatoses will be conducted in Chicago, beginning January 11, 1943, by Dr. Louis Schwartz, Chief of the Dermatoses Investigation Section of the U. S. Public Health Service of Bethesda, Maryland. The teaching period will cover two weeks, the first of which will be devoted to lectures and demonstrations, and the second to plant visits. Dermatologists, industrial physicians and others interested in the course should communicate with

55 East Washington Street
Dr. Edward A. Oliver
Chicago, Illinois

No limit will be placed upon enrollment for the lectures but the visits to the plants will be limited to twenty-four enrolees. No fees will be charged.

"A very wholesome and marked improvement" in the University of Illinois College of Medicine, Chicago, has been made since the last

(1935) inspection by the American Medical Association, according to the report of a study made by that body last August and released today.

(Charges that the University of Illinois had deteriorated during the past eight years as the result of political activity by the Board of Trustees resulted in action by the Board at its June, 1942, meeting inviting the American Council on Education and the Amercian Medical Association to investigate the University. The American Council on Education has not yet reported but the American Medical Association has submitted an elaborate report after an exhaustive study of the College of Medicine.)

The College of Medicine is "an integral part of the University of Illinois, a state-owned institution," the report says, "controlled by an elected board of trustees, of which Doctor Karl Meyer, Chicago, is president."

The report states that "there is apparently being effected a rather progressive reorganization of the curriculum which promises much more satisfactory clinical training during the third and fourth year than was possible at the time of the last visit (1935).

"Members of the faculty, both preclinical and clinical, are in general outstanding and competent men who appear to be greatly interested in teaching," the report continues, "and it would appear that the heads of practically all of the clinical departments recognize the need for additional clinical facilities under their immediate supervision.

"There is being developed in connection with the dental, medical and pharmacy schools, correlated, cooperative and even integrated teaching program. The school is to be commended for undertaking this interesting experiment which should be a real contribution to professional education.

"Further developments are currently being effected or studied and these promise to offer unusual opportunities in the fields of both undergraduate and graduate medical education.

"The physical plant for the preclinical departments is apparently satisfactory, and the departments of Pathology and Bacteriology which were very unsatisfactorily housed at the time of the previous visit now have satisfactory quarters."

Dr. Raymond B. Allen, executive dean of the three colleges of the University of Illinois located in Chicago, said in commenting on the report: "In no important particular has the report brought forth any facts or conclusions about which the University has been unaware or about which something has not or is not being done. Many of the suggestions for further improvement must await sufficient financial aid. Nevertheless, it is invaluable to have outside agencies express their unbiased, informed judgment as exemplified in this report."

MARRIAGES

Isidore Brill, Champaign, Illinois, to Miss Rosa Lee Rose of Chicago, October 13, 1942.

Roosevelt Brooks to Miss Gwendolyn Redmon, both of Chicago, June 27.

Audrey Jane McDonald, Roodhouse, Illinois, to Mr. James M. Mallowe of Chicago in Compton, Calif., September 18.

Cynthia T. Morton to Charles C. Ashley, both of Paris, Illinois, July 1.

DEATHS

Edward M. Bench, Galena; Northwestern University Medical School, 1898. Practiced medicine in Galena for 42 years. Died November 27, 1942 at the age of 70.

Elizabeth Anne Bergner, Chicago; Rush Medical College, Chicago, 1930; on the staffs of the Swedish Covenant and Children's Memorial hospitals; formerly on the visiting staff of the Lewis Memorial Maternity Hospital; aged 46; died, October 26, in the Albert Merritt Billings Hospital of hepatitis.

Field B. Beery, Chicago; National Medical University, Chicago, 1899; aged 64; died, September 18.

Benjamin F. Croutch, Chicago; Loyola University School of Medicine, 1918. Was active for many years as surgeon for the veterans bureau, and at one time was a member of the examining board of the United States Department of the Interior. At the time of his death he was on the surgical staff of the Walther Memorial, St. Elizabeth's and Illinois Central Hospitals; associate in surgery at the University of Illinois College of Medicine. Died October 29, 1942 at the age of 49 years.

Meyer M. Cutler, Chicago; University of Illinois College of Medicine, 1937. Resident radiologist at Michael Reese Hospital. Died November 17, 1942 in Miami Beach, Florida. He was 30 years old.

Edwin Hamill, Chicago; Rush Medical College, 1888. Practicing physician in west side Chicago for 55 years. Died November 14, 1942 at the age of 79.

Martha Hayward, Aurora; University of Illinois College of Medicine, 1907. Practiced medicine in Colorado and was member of Alpha Epsilon Iota, Woman's national medical fraternity. Died October 30, 1942 at the age of 74.

William Roy Hedrick, Decatur; University of Illinois College of Medicine, 1910. Died suddenly of a heart attack on November 17, 1942 at the age of 56.

David S. Hillis, Chicago; Northwestern University Medical School, 1898. Member of the Northwestern faculty in 1908 and was named professor of obstetrics in 1939. At the time of his death was chairman of the obstetrical division of Cook County Hospital and Head of the obstetrical department of Passavant Hospital. At one time associated with the late Dr. Joseph B. DeLee, founder of Chicago Lying-In Hospital, and was active in the invention and development of the DeLee-Hillis stethoscope. He contributed liberally to medical literature, winning particular attention with his work on eclampsia. He served with the U. S. Naval Reserve as a lieutenant commander in World War I and was retired with the rank of captain. Died November 9, 1942 at the age of 69 years.

Vincent Frederick Keller, Chicago; Bennett Medical College, Chicago, 1913; aged 55; died, September 25, in the Veterans Admission Facility, Hines, Ill., of heart disease.

J. Brown Loring, Chicago; McGill University, Montreal, Canada, 1883; post-graduate work at Royal College of Surgeons in London. Served for a number of years as assistant professor of clinical ophthalmology at the University of Illinois. Died November 6, 1942 at the age of 83.

Charles M. Matter, Chicago; Northwestern University Medical School, 1898. Practicing physician in Chicago for 40 years. Died of a heart attack November 7, 1942 at the age of 67.

Bryan L. Mitchell, Wilmette; Rush Medical School, 1925. Died October 29, 1942 at the age of 45.

Ben Reitman, Chicago; Chicago College of Medicine and Surgery, 1904. Died of heart attack on November 16, 1942 at 63 years of age.

Dorothy K. O'Connor (Wife of Dr. G. H. Rezek) Riverside; University of Illinois College of Medicine, 1938. Died November 20, 1942 at the age of 31.

Albert LeRoy Reuss, Belleville; Washington University School of Medicine, St. Louis, Missouri, 1903. Was widely known surgeon in Belleville for many years. Health Commissioner at one time. Died from coronary occlusion October 22nd, 1942 at the age of 61 years.

Richard S. Smith, Chicago; Howard University School of Medicine, Washington, D. C., 1905. Practiced in Chicago for 30 years. Died November 26, 1942 at the age of 61.

Rufus B. Stolp, Wilmette; Chicago Homeopathic Medical College; 1897. On medical staff at Evanston Hospital; associate in medicine at Northwestern University Medical School, Chicago, 1900; aged 69; died, 67 years of age.

William James Swift, Chicago; Rush Medical College, 1904. Formerly, associate professor of Surgery at Loyola University School of Medicine; at the time of death was attending surgeon at Alexian Brothers' and St. Elizabeth's Hospitals. During World War I was in command of the First Illinois field base hospital and was a major in the 124th field artillery for many years. Died November 10, 1942 at the age of 64.

Carl H. Thomsen, Dolton, Ill.; Northwestern University Medical School, Chicago, 1900; aged 69; died, October 22, in St. Luke's Hospital, Chicago, of peritonitis following an abdominal operation.

Carl V. Urbom, Rockford; Hering Medical College, Chicago, 1903. Widely known physician in Rockford for 39 years. Died October 30, 1942 at the age of 83.

Jewel H. Vaught, Chicago; Central College of Physicians and Surgeons, Indianapolis, 1903. Retired for 15 years. Died October 30, 1942 at the age of 68.

Homer Samuel Warren Jr., Chicago; University of Illinois College of Medicine, Chicago, 1922; member of the Illinois State Medical Society; aged 51; past president of the American Hospital, where he died, October 18, of carcinoma following x-ray burns.

Oliver B. Yarnell, Wenona; Keokuk Medical College, College of Physicians and Surgeons, Keokuk, 1902. Formerly of Bowen, Illinois. Died October 24, 1942 at the age of 66 years.

Edward C. Zoll, Elmwood; Keokuk Medical College, Iowa, 1898. Practicing physician in Elmwood for the past 44 years. Died November 13, 1942 at 80 years of age.

P. R. N.

The Jocular Jingles of C. G. F.

by

Charles G. Farnum M. D.

Peoria, Ill.

MY PEGASUS

My Pegasus, that I so oft bestride,
Is not a graceful, sprightly steed;
He never canters through the country side,
Nor gallops gaily o'er the mead.

With sunken flanks and withers lean and flat
And ring bones on his both fore feet,
With spavins, curbs and splints, and this and that,
Small wonder he is not so fleet.

His stifle joint is sprung, he has the heaves,
His off hind leg is somewhat lame,
And though wind-broken he somehow achieves
A gayness in his ancient frame.

He is withal a loyal, friendly nag,
Right merrily we ride throughout each day;
Since neither has a lot o'er which to brag,
We seem to fit each other every way.

CHRISTMAS SHOPPING

With only two shopping days more
He tries to get into a store,
Around him are women who struggle and shout,
They jab him and poke him and shove him about,
He gasps for his breath with his tongue hanging out,
His body is beaten and sore.

For only wild women abound,
Their shrieks make the rooms all resound,
They snatch at each thing that he tries to select,
And all he can hope for is what they reject,
It does him no good to protest or object,
And never a clerk to be found.

He reaches the counter for toys,
Surrounded by girls and by boys,
They push at his kness and they step on his toes,
They clutter his pathway wherever he goes,
With hat all awry and a bump on his nose,
He's deafened by clatter and noise.

All battered by matron and miss,
His search he at last must dismiss,
He's lost some illusions, he now is a wreck,
Next Christmas he'll send every body a check,
And never go shopping at risk of his neck,
If Holiday Spirit is this.

RED LEAVES

Our lives go through a cycle
Like leaves upon a tree,
That grow throughout their season,
Then reach senility.

Where most are withered, faded,
And many sombre brown,
And hordes of them are yellow,
But red leaves are the crown.

I care not where winds blow me,
Nor when nor what my fate —
I hope to be a red leaf,
A bright and cheery red leaf.

A gay and brilliant red leaf,
'Til I disintegrate.

Professor Paresis says, "Some girls show distinction in their dress while others merely show distinctly."

The World Over

Tuberculosis already appears on the increase in the warring nations in the second world conflict. No single cause is apparent. All the factors concerned in the other world war again operate. Malnutrition is known to be serious in certain countries. Esmond R. Long, M.D., Amer. Rev. of Tuber., June, 1942.

Deaths from tuberculosis in Scotland have been increasing in number since the war began. The increases are in every instance larger for females than for males and the proportionate increases are greatest for tuberculosis meningitis, a form of the disease which reacts quickly, to increase in the amount of infection present in the community. Editorial, Tubercle, June, 1942.

Tuberculosis is again on the increase in Canada and has gone from eighth to seventh place as a cause of death. Bulletin, Canadian Tuber. Assn., Sept., 1942.

Even after 1,000 days of war the health of the nation is in many respects better than it was in peacetime. Tuberculosis, however, is an exception. The Minister of Health for Great Britain. Bulletin, Canadian Tuber. Assn., Sept., 1942.

Despite the precaution of a supplementary diet for persons with active tuberculosis, the march of the disease has been ominously progressive in France. The figures for 1941 compared with corresponding ones for 1939 show a 10 per cent increase in mortality from tuberculosis. In children from one to nine, the increase was 28 per cent. Marcel Moine, M.D., Academie de Medecin de Paris, Sept., 1941.

In the past a frequent complaint from mothers was the expense incurred when the large bottle of antiricketic was accidentally upset.



OLEUM PERCOMORPHUM

Even if the bottle of Oleum Percomorphum is accidentally tipped over, there is no loss of precious oil nor damage to clothing and furnishings. The unique Mead's Vacap-Dropper* is a tight seal which remains attached to the bottle, even while the antiricketic is being measured out. Mead's Vacap-Dropper offers these extra advantages also, at no increase in price:

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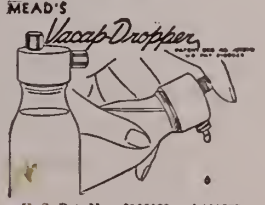
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Book Reviews

SYNOPSIS OF PATHOLOGY. By W. A. D. Anderson, M.A., M.D., assistant professor of pathology, St. Louis University School of Medicine; pathologist, St. Mary's Group of Hospitals. Cloth. 661 pages. Illustrated. C. V. Mosby Company, 1942. Price $6.00.

Doctor Anderson has "boiled down" an immense amount of material in the field of pathology to compile this synopsis. Even though the material has been reduced, the exactness and detail so necessary in this field, has been retained wisely and carefully.

The volume should make an excellent reference book and should serve as a means of review. The references are well chosen and give the reader or the student a fine opportunity to enlarge on the subjects presented. This book can be recommended for the practitioner and also for the student.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume XXVI, Number 4. Symposium on Industrial Medicine. 20 contributors. Cloth Bi-monthly publications. 348 pages. W. B. Saunders, July 1942, Philadelphia. Price $16.00 per year.

Each of the contributors has presented a different phase of industrial medicine, which is presented as a special branch of medicine with its own particular and special problems. The importance of preventive medicine is stressed, and the growing responsibilities placed upon the shoulders of the industrial physician today during this war emergency are emphasized.

The first three articles deal with the physician's place in modern industry, the organization and management of a medical service in industry, and the physical examinations given for preemployment and periodic check-up of employees. The remainder of this volume deals with specific phases of industrial medicine and covers many important subjects in the vital field of war industry. This volume will serve as a well organized review for those physicians interested in this branch of medicine.

FIRST AID PRIMER. Also including Civilian Defense Health Aids, Emergency Feeding, Blackout Instructions, Morale Through Nutrition. By Hermann L. Wenger, M.D., and Eleanora Sense, B.S. Octavo of 104 pages, illustrated. M. Barrows and Company, New York, 1942. Price $1.00.

This little book is well named — a primer in first aid, as it is elementary in all of its chapters. The average layman will learn much from the simple drawings which illustrate various technique and procedure.

Included in this volume are instructions on blackouts, a chapter on "morale through nutrition" which discusses the body requirements and vitamin needs. Simple daily menus are given, and pointers on food buying, food care, and cooking rules.

During the present emergency this little book should be of use to those teaching first aid classes and to laymen interested in cooperating for the best interests of public health and welfare.

CLINICAL ANESTHESIA. A Manual of Clinical Anesthesiology. By John S. Lundy, B.A.,

(Continued on page 28)



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* *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154*
Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60

TO PHYSICIANS WHO SMOKE A PIPE: We suggest an unusually fine new blend—Country Doctor Pipe Mixture. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

M.D., Head of Section on Anesthesia, Mayo Clinic; Professor of Anesthesia, Mayo Foundation for Medical Education and Research, Graduate School, University of Minnesota; Diplomate and Member of the Subcommittee on Anesthesia, National Research Council. With 266 illustrations. W. B. Saunders Company, 1942.

All types of anesthesia are given a thorough and complete coverage in this authoritative work of Doctor Lundy. He is unusually well qualified to discuss the various types of modern anesthesia and the correct choice by the physician. All types come in for a complete outline — local anesthesia, block anesthesia, dental, etc., spraying methods and other technique not so easily mastered such as spinal, rectal and intravenous. The uses of spinal anesthesia is taken up separately and three interesting chapters are devoted to this technique.

The author has issued various warnings about anesthesia. He has discussed types of anesthesia accessible to the surgeon who may be expected to work in strange places or under difficult circumstances, a portion of this volume which may prove of excellent counsel during this present emergency.

This is a book of high calibre; it is a book well written and seriously and carefully prepared.

Nephritis. By Leopold Lichtwitz, M.D., Chief of the Medical Division of the Montefiore Hospital; Clinical Professor of Medicine, Columbia University, New York. Grune & Stratton, New York. Price $5.50.

This book on nephritis is based on some thirty years of wide experience in this particular field of medicine. Much of his material and nearly all of his beliefs are based upon observation of the patient plus exact laboratory examinations. Methods of analyzing renal function and urinary excretory capacity are simplified in such a way that the technique can be done by any physician with a minimum of laboratory equipment. Adequate diet giving optimum fluid intake is outlined, and the entire subject is covered completely and authoritatively. The reader will note the attitude of Doctor Lichtwitz toward physiology and pathology — as a means of aiding and assisting the physician in one ultimate aim — care of his individual patients.

Symposium on Military Medicine. Medical Clinics of North America. Volume 25, Number 6. 363 pages with 150 figures. W. B. Saunders Company, Philadelphia. November issue, 1941. Price $16.00 per year.

This issue of the Medical Clinics of North America is devoted to a symposium on military medicine and military surgery. Contributions from medical officers of our Army and Navy as well as from civilian physicians have been selected.

Medical practice in the armed forces, rather than organization and administrative problems, is thoroughly discussed. Clinical articles are included on tuberculosis, comunicable diseases, cardiovascular diseases, military ophthalmology, dematology and syphilology, emergency conditions of the abdomen, minor war injuries, shock, etc. This volume should offer a wealth of material to the physician in service, or to the man just entering upon his military duties in the medical corps. Selections were made by Major General James C. Magee, Surgeon General of the United States Army, and by Rear Admiral Ross T. McIntire, Surgeon General of the United States Navy.

The Medical Applications of The Short Wave Current. By William Bierman, M.D., Attending Physical Therapist, Mount Sinai Hospital, New York City. Second Edition. 344 pages. The Williams and Wilkins Company, Baltimore, 1942. Price $5.00.

The use of short wave therapy has developed to such an extent that most specialists and general practitioners make use of this type of treatment. Sufficient time has elapsed to permit a more accurate scientific study of the uses and the results of the short wave current. The results are reported in an unbiased manner, and every method of application is discussed. Physicians employing this agency should be familiar with the material given in this volume. The book is well written and illustrated. It most certainly should be read by those to make use of the short wave current.

(Continued on page 30)

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Books Received

The following books have been received for reviewing, and are herewith acknowledged. This listing should be considered as a sufficient return for the courtesy of the sender. Books that appear to be of unusual interest will be reviewed as space permits each month. Readers desiring additional information relative to books listed, may write the Editor who will gladly furnish same promptly.

Nasal Medication, A Practical Guide. By Noah D. Fabricant, M. D., The Williams & Wilkins Company, Baltimore, Md., Price $2.50.

How to Teach Nutrition to Children. By Mary Pfaffmann and Frances Stern. M. Barrows & So. Inc., New York. Price $2.00.

Military Medical Manual of Dermatology. Issued under the auspices of the Committee on Medicine of the Division of Medical Sciences of the National Research Council by Donald M. Pillsbury, M. D.; Marion B. Sulzberger, M. D.; Clarence S. Livingood, M. D. 421 pages with 109 illustrations. W. B. Saunders Company, 1942. Philadelphia and London. Price $2.00.

Bacteriology Laboratory Methods. By E. S. King, M. D., Professor of Bacteriology in the Bowman Gray School of Medicine of Wake Forest College, Bacteriologist to the Baptist Hospital. Winston-Salem, N. C. Charlotte Medical Press. Charlotte, N. C. Price $2.50.

Fundamentals of Psychiatry. By Edward A. Strecker, M. D., Sc. D., F.A.C.P. Professor of Psychiatry and Chairman of the Department, Undergraduate School of Medicine, University of Pennsylvania; Psychiatrist to the Pennsylvania Hospital; Attending Psychiatrist, Psychopathic Division, Philadelphia General Hospital. J. B. Lippincott Company, Philadelphia, London, Montreal. Price $3.00.

Eat What You Want! By W. W. Bauer, M. D., and Florence Marvyne Bauer. Greenberg, Publisher. Price $2.00.

A Venture in Public Health Integration. The 1941 Health Education Conference of the New York Academy of Medicine. Columbia University Press. Morningside Heights, New York. Price $1.00.



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CHICAGO STUDY THROWS LIGHT ON THE INHERITANCE OF DIABETES

Indicates It Is Impossible To Estimate Chances Disease Will Appear In As Yet Unaffected Members Of Diabetic Families

A study indicating that it is possible to estimate the chances that diabetes will appear in as yet unaffected members of diabetic families is reported in *The Journal of the American Medical Association* for October 24 by R. T. Woodyatt, M.D., and Marseille Spetz, M. D., Chicago.

"When an inheritable character makes its appearance in one generation of a single family at a given age, in the following generation at an earlier age and so on, the phenomenon is known as anticipation . . . ," the authors explain.

They studied 100 families in each of which the disease had been known to occur in members of two or more generations and in which the ages of onset could be ascertained.

In 10 of 100 families studied anticipation was not observed and in the remaining 90 the data showed anticipation in varying degrees. In 10 of 88 families that showed the disease in two generations the diabetes skipped one generation, occurring in the first and third generations. In these families the differences between the ages of onset in the first and third generations varied from twenty-five to sixty-five years. In all the families that showed the trend as between two successive generations (either first and second or second and third or both) the average difference between the age of onset in the two generations was twenty years.

On the basis of the general average of twenty years, the authors say that "In a given typical or composite case (essentially similar to some actual cases) the disease might appear in a first generation in the forties, fifties or later, in a second generation in the twenties, thirties or forties, in a third in the first or second decade. Thus a parent could be affected at the age, let us say, of 50 years, a child of the parent (or nephew or niece) at the age of 30, a grandchild . . . at the age of 10. Or the parent could be affected at the age of 50 and a grandchild at 10 with no diabetes in the second generation. Then a continuance of the trend at the same average rate would bring the age of onset in a fourth generation to minus ten years or to whatever

(Continued on page 32)



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DIABETES (Continued)

period this may imply in prenatal (before birth) time. We might think perhaps of nonconception or of the development of the disease in intrauterine (within the womb) life with resultant death of the fetus (unborn child). In any event, when last seen the trend is pointing in the direction of extinction of the strain (on one side of the family, if not on both). . . ."

The two physicians say that this description gives a picture of diabetes appearing in a family that has not exhibited it before. They add that "The whole course can be run in two generations, but it is more commonly completed in three or four and rarely in more. That is to say, we rarely find families with a history of diabetes in more than four generations. . . ."

They point out that "There is no doubt of the inheritability of diabetes, and the evidence is strong at the present time that it is actually inherited (or susceptible of transmission) in every case. . . ."

"The observations are further of some practical interest," the two physicians explain, "in

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connection with estimations of the probabilities that the disease will appear in as yet unaffected relatives of diabetic patients. If the age of onset in a parent should be 40 years, a child of the parent (or nephew or niece) developing the disease would do so, in a large majority of cases, at an earlier age and, on the basis of averages found in this series, at about the age of 10. So if a child be unaffected at the age of 10 the probability that he would later develop the disease would diminish with every passing year, until at the age of 40 it would become quite remote (although the possibility would still remain that in this particular family the anticipatory trend was not yet in operation). However, if 1 child should develop the disease, the age of onset in his case would afford an index of the critical period for his generation.

"In that case a younger brother, sister or cousin of the affected child developing the disease would do so at a somewhat earlier age in a majority of cases (about 4 out of 5 on the basis of averages found in this series). But an older brother (or) sister . . . developing the disease would be correspondingly more likely to do so at a somewhat later age. In their cases the chances of being affected would diminish only after they had passed the critical period for their generation. . . .

"The same principles that apply to the brothers (or) sisters . . . of the child in question would also apply to older and younger brothers or sisters of the parent. Again, if diabetes appears in a child (of a family that has not exhibited the disease before) it may develop later in members of preceding generations. The probability that it will appear in the generation of the parent does not lessen until after the passage of ages twenty years greater than the age of onset in the child, and then but gradually for another decade. Again, if a parent developed the disease at 50 to 60, a grandchild who developed the disease at all would be more likely to do so in the first or second decade of life, and so on. . . ."

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1. Jenkinson, E. L.: J. A. M. A. 107:755 (Sept. 5) 1936.

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IN 1879 BABIES REACHED 40

That the average length of life in America, at least among wage-earners and their families, has almost doubled during the past 60 years, is announced by the Metropolitan Life Insurance Company. Average length of life to-day, computed on the basis of mortality among the industrial policy holders of the company in 1941, is 63.42 years. During the period 1879 to 1889 early records show that the expectation of life for a one-year-old baby was 40 years. But deaths among infants were very much more frequent in those days than now. From other records relating to that time it is known that the expectation of life at birth, or the average length of life, was about 34 years, only a little over half what it is now. The average industrial policy holder 35 years old to-day still has as many years of life before him as the child in the wage-earning family of 1879 to 1889 had at the time of its birth.—*Science, June* 19, 95 :13, 1942.

Letter from college student: "Dear Dad: Gue$$ what I need mo$t of all? That'$ right. $end it along. Be$t wihe. Your $on, Tom."

Letter from dad to son: "Dear Tom: NOthing ever happens here. We kNOw you like your school. Write us aNOther letter aNOn. Jimmie was asking about you at NOon. NOw we have to say good-bye."

A toastmaster introduced Charles A. Edison, former Assistant Secretary of the Navy, as "The illustrious son of an illustrious father, a man who by his own superb achievements had nobly carried on the fame of the great inventor, Thomas Alva Edison." Thereupon Governor Edison arose, appreciated the beautiful sentiments directed toward himself, said he was unworthy of all of them because "I have considered myself only as one of my father's early experiments."

Helen Essary in *Times-Herald,* Washington.

A very small country boy was for the first time in a big city. Taking an elevator to the top of a skyscraper, the child and his father had shot up thirty stories at breath-taking speed, when the little lad asked timidly, "Daddy, does God know we're coming?"

—*Alabama Christian Advocate.*

Illinois State Medical Society

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(Continued on page 44)

SAYS AVERAGE LENGTH OF LIFE CAN BE INCREASED TO 75 YEARS

Hygeia Editor Declares That What Is Needed Is Improved Dissemination Of Knowledge Now Available To Scientific Medicine

Pointing out that the average length of life is now 65 years and can reach without too much trouble 75 years, Morris Fishbein, M.D., Chicago, Editor of *Hygeia, The Health Magazine,* in an editorial in the November issue declares that "What is needed in order to make more people live to be 75 years of age is still further improvement in dissemination of the knowledge now available to scientific medicine." The editorial says:

"Out of 100,000 infants born in 1876, only 30,000 were expected to survive to the age of 65. Actually, however, 42,000 survived to the age of 65—because of the improvement in medical science, public health and general welfare. The American population is becoming older. In 1850 only 2.6 per cent of our population were 65 years of age. In 1900 it was 4.1 per cent, and in 1940, 6.8 per cent. By 1980 it is estimated that those who are 65 years of age or over will constitute almost .15 per cent of our total population.

"According to Biblical legend, the years of man are three score and ten. The life cycle may be divided into twenty years of growth, thirty years of maturity and twenty years of gradual breakdown. However, many people live beyond 70 years of age. Some people live to be 100 years or over. Since human beings can live to be 100 years of age, it would be well perhaps to set the life span at that age. However, Louis I. Dublin, eminent statistician in the field of medicine, feels that the average length of life is now 65 years and can reach without too much trouble 75 years. . . .

"Already, infant mortality has been reduced in some of our large communities to a rate of 29 in comparison with a rate of more than 200 fifty years ago. When only 29 out of every thousand babies that are born die in the first year, that rate begins to reach the irreducible minimum. Possibly, however, further improvement in prenatal care and in the mechanism of childbirth will bring a reduction even in the rate of 29.

"More and more is being done to control the infectious diseases of childhood. Much can be done to eliminate the accidents now responsible for carrying away many people unnecessarily. Accidents of all types are now fifth in the list of the causes of death. Such adverse influences can be controlled by intelligent human beings.

"Most important in prolonging life after 50 are sound rules of diet and personal hygiene and suitable attention to the detection of degenerative diseases at the earliest possible moment.

"We have not previously had a sufficiently large population of the aged to evaluate scientifically all the hazards that confront the aged human being nor to develop the necessary improvements in preventive and curative medicine to meet the hazards that arise. More is being learned now about these matters. The accumulation of new information may in our own lifetime bring about great advances that will mean much toward prolongation of life. For example, the new methods of detecting early the enlargement of the prostate gland that interferes with the function of elimination and the use of the new procedure called transurethral resection, which permits control of this condition by relatively simple procedures, are bound to have an appreciable effect on the death rate from this cause.

"A new specialty is growing in medical science called geriatrics, which means the care of the aged. More and more physicians will become interested in gerontology, a study of the problems of the aged. The old age security laws will unquestionably help to mitigate the hardships of those of advanced years who are now economically dependent. The combination of all the various considerations that are now being given to the degenerative diseases, to the hygiene of the heart, the liver and the kidneys must yield an improvement in life expectancy at least to 75 years of age in our time.

"The biologic and medical sciences have advanced much further in their consideration of the problems of aging than have the social sciences.

"Seneca said that old age is an incurable disease. John Dewey sees hope in progress. 'When we shall envisage social relations and institutions in the light of the contribution they are capable of making to continued growth,' he said, 'when

(Continued on page 38)

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CAUSE OF INFLAMMATORY DISEASE OF THE EYE MAY HAVE BEEN FOUND

An Agent Of The Nature Of A Virus Isolated In Studies Of Keratoconjunctivitis Among Shipyard Workers, A. M. A. Journal Says

The isolation of a specific agent of the nature of a virus which is probably responsible for epidemic keratocojunctivitis, the inflammatory disease of the eye which has been afflicting shipyard workers, is discussed in *The Journal of the American Medical Association* for October 17, which comments on a report in the October issue of the *Archives of Ophthalmology* by Murray Sanders, M.D., New York, on experimental studies of the disease among shipyard workers in New York. Previously, although a virus had been suspected as the cause, none had been identified.

The disease, which had been sweeping certain sections of the West Coast and had previously been reported from Hawaii, was referred to by *The Journal* in an editorial in its February 7 issue as epidemic virus conjunctivitis (inflammation of the membrane lining the eyelid and the front portion of the eyeball). Apparently the condition found among shipyard workers in New York was more severe than had been reported from the West Coast and Hawaii in that in severe cases is also involved the cornea, which is the transparent structure forming the outside part of the external layer of the eyeball, hence the term keratoconjunctivitis.

As pointed out in the current issue of *The Journal,* cultures and smears from conjunctival scrapings from some 50 cases encountered in Hawaii failed to repeal any offending organism. This outbreak occurred during the summer of 1941. In October a considerable number of cases began to appear in California and in November and December of that same year an epidemic broke out in Oregon.

The Journal explains that the infectious agent could be maintained by first inoculating scrapings into mice and then transferring the mouse brain emulsion from the second mouse passage into tissue culture.

"A human volunteer," *The Journal* says, "who received the mouse virus in his conjunctiva responded in four days with a mild conjunctivitis. When mouse virus was again applied to the same eye there was observed four days later a typical picture of epidemic keratoconjunctivitis. Definite neutralization of the agent was obtained when it was mixed with serum of a patient who supplied the original material. . . . The serum of another patient, also recovered from epidemic keratoconjunctivitis, contained definite neutralizing antibodies. (This can be interpreted as evidence of the specific nature of the virus.) However, a third patient who had recovered from epidemic keratoconjunctivitis failed to show neutralizing antibodies. Sanders states that a second isolation of virus has been effected and that thorough investigation of the two strains is now under way. It is to be hoped that the investiga-

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tion of these two strains will throw additional light on the specificity of the offending agent."

NO WIDELY ACCEPTED EXPLANATION YET FOR SEASICKNESS

A review by W. J. McNally, M.D., and E. A. Stuart, M.D., Montreal, Canada, in the current issue of *War Medicine,* of experimental work on the labyrinth or inner ear in relation to seasickness and other forms of motion sickness fails to bring to light any widely accepted explanation for the cause of the condition or immunity to it. "The labyrinth has been shown by experiment to play an important, probably the most important, part in the causation of motion sickness," the two physicians explain.

TO DIAGNOSE BLINDNESS

The possibility that by electrical stimulation of the eye, it may be possible to distinguish between blindness due to disease of the retina and blindness caused by disease of the optic nerve has been suggested by Dr. H. D. Bouman, of the University of Rochester. When a very faint, barely perceptible electric current is applied to the normal eye, and effect is noted when the intensity of the electric stimulation changes. This is due to action of the nerve fiber. Three patients with almost total blindness were examined by Dr. Bouman by the electric stimulation method. One of them showed complete loss of electric excitability in the blind eye; this patient suffered from one-sided neuritis of the optic nerve. The other two showed excitability, but the response was like that of dark-adapted eyes even though the patients were examined in broad daylight. These cases had diseases of the retina, not of the optic nerve.—*Science, May 1, 1942.*

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SUPREME COURT TO REVIEW QUESTIONS RELATED TO PRACTICE OF MEDICINE

Questions related to the practice of medicine will be reviewed by the Supreme Court of the United States, *The Journal of the American Medical Association* for October 24 says in an editorial explaining the events leading up to the recent announcement of the court. *The Journal* says:

"An indictment was filed on Dec. 20, 1938 in Washington, D. C., which charged the American Medical Association, the Medical Society of the District of Columbia, two other medical societies, certain officers of the medical societies and others with conspiring to restrain the trade of Group Health Association, a corporation, in violation of section 3 of the Sherman Act. The District Court first held that the indictment did not charge the defendants with any offense known to the law, but the Court of Appeals of the District of Columbia reversed this holding and directed a trial of the case. In due course a trial was held and the jury found the American Medical Association and the Medical Society of the District of Columbia guilty and all of the other defendants not guilty.

"On May 29, 1941 the District Court entered judgement on the verdict of the jury. An appeal was taken to the Court of Appeals of the District of Columbia, and that court on June 15, 1942 affirmed the judgment of the lower court. The American Medical Association and the Medical Society of the District of Columbia filed a petition in the Supreme Court of the United States asking that court to issue its writs of certiorari to review the decision of the Court of Appeals and to reverse it and to hold that there had been no violation of section 3 of the Sherman Act. By their petition for certiorari filed in the Supreme Court of the United States, the American Medical Association and the Medical Society of the District of Columbia contended that there were eight important questions presented by the record in the case wherein the trial court and the Court of Appeals committed error.

"On Oct. 12, 1942 the Supreme Court of the United States granted the petition for writs of certiorari and thereby agreed to review and consider the record in the case but limited the review to the consideration of the first three questions presented by the petition for writs of certiorari, which were:

1. Whether the practice of medicine and the rendering of medical services as described in the indictment are "trade" under section 3 of the Sherman Act.
2. Whether the indictment charged or the evidence proved "restraints of trade" under section 3 of the Sherman Act.
3. Whether a dispute concerning terms and conditions of employment under the Clayton and Norris-LaGuardia acts was involved, and, if so, whether petitioners were interested therein, and therefore immune from prosecution under the Sherman Act.

"The American Medical Association and the Medical Society of the District of Columbia will now file their printed brief and argument in the Supreme Court of the United States and thereafter the case will be argued orally and the court will then consider the three questions which it has consented to review and in due course file its decision and opinion."

An amazing story of how Russians are using dogs to attack and destroy German tanks and snipers comes from Moscow.

On the Kalinin front, German tanks were bearing down on Soviet dugouts. Hearing the dogs barking and knowing by experience what it meant, the Germans turned back. The dogs attacked. The foremost tank was blown up by a dog named Tom.

Red Army troops commanded by Lieut. Konkoff stemmed a German tank attack in the Izyum sector with several trained dogs blowing up nine tanks and two armored cars. Some of the dogs have blown up several tanks and survived. Only after the war is over will their method be revealed, the Russians say.

—*Grit.*

ROGUES' GALLERY

For lack of an older subject, a Gestapo agent in Holland questioned a little boy. "Have you a picture of Hitler hanging in your house?"

"Nope," said the little boy.

"Have you a picture of Goering or von Ribbentrop hanging in your house?" persisted the Gestapo agent.

"Nope," the boy replied again. "But when my daddy gets out of the concentration camp, he said he's going to hang them all."

—*Knickerbocker Weekly*



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Immediately after the arrival of Mary Garden in one of the larger cities in Central France a doctor called upon her informing her she would have to undergo vaccination as there was a serious epidemic in town. Mary smiled, insisting that she would refuse to wear tattoos on her arms.

The doctor was not embarrassed and assured her that vaccination could be applied anywhere upon a body. Garden took up the challenge and invited the vaccinator to a performance of *Thais* that night, one of *Aphrodite* the next night, and to a matinee of *Pelleas and Melisande* two days later.

The doctor appeared early that morning. He stood in the door, hesitating, waiting. Garden stormed:

"Well, Monsieur le docteur, where are you going to vaccinate?" Pause, another pause . . . Then the doctor uttered convincingly:

"Madame, you better swallow it!"

—Dr. Edward L. Israel in *Coronet*.

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—*Journal of the American Medical Association.*

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Supervision is done by an Irishman
And what do they make? American Flags!

—*Quote*

CIVILIANS IN TARGET AREAS OF COUNTRY SHOULD CARRY IDENTIFICATION TAGS

"To facilitate identification, each civilian in target areas of the country should be encouraged to carry an identification bracelet or necklace or metal identification pocket piece," *The Journal of the American Medical Association* advises in its October 17 issue in a condensation of Bulletin No. 5 on Emergency Mortuary Services, to be issued by the Medical Division of the United States Office of Civilian Defense. It is pointed out that in some air raids 40 per cent of the casualties may be fatal and that although the wounded require first attention, the dead should also be cared for promptly and inconspicuously.

The staff of the emergency mortuary service, according to the bulletin as condensed in *The Journal,* should include a physician to confirm deaths and a coroner or other medical examiner's representative who has authority to sign death certificates and order disposal of unidentified bodies. Volunteer members of an emergency mortuary organization are to enroll with the Volunteer Civilian Defense Office and are entitled to wear the armband and insignia of the Emergency Medical Service, of which the Mortuary Service is a part.

Among the other points brought out in the condensation by *The Journal* is that it is important that the identification tag on gas contaminated bodies be distinctly marked "gas case" in order that persons handling them will be warned to give them special treatment. Such bodies should be handled only by workers wearing protective clothing and masks and these workers must subsequently go through the cleansing prescribed for decontamination squad members.

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FINDS TYROTHRICIN BENEFICIAL IN TREATING LOCAL INFECTIONS

Bactericidal Substance Recently Isolated From A Soil Bacterium Is Effective On Certain Organisms, Physicians Says

Tyrothricin, a bactericidal substance recently isolated from a soil bacterium, applied to ulcers resulted in sterilization and healing if the local infection was caused by Streptococcus haemolyticus, Staphylococcus aureus or Streptococcus faecalis and encouraging results were obtained when it was applied to mastoid cavities following mastoid operation, Charles H. Hammelkamp, M.D., Boston reports in the current issue of *War Medicine*. The latter is published bimonthly by the American Medical Association in cooperation with the Division of Medical Sciences of the National Research Council.

Dr. Rammelkamp's findings are based on the use of the substance in the treatment of 58 localized infections, most of them located on the arms or legs of patients, and its application at the time of operation of 15 mastoid cavities infected with hemolytic streptococci.

"Early in the present studies," Dr. Rammelkamp says, "it was noted that in an infection associated with a mixed flora, that is, both with gram-negative and with gram-positive organisms, it was impossible to rid a lesion of the gram-positive component, even though large amounts of the bactericidal substance were applied. . . ."

He says that the results obtained in the mastoid group justify further trial of the substance in the treatment of mastoiditis following operation.

"The value of tyrothricin in the treatment of other forms of infection has not been established," Dr. Rammelkamp says. "Superficial streptococcic infections of wounds, burns or skin should respond to the local application of the bactericidal substance; staphylococcic infections are likely to be much more resistant. . . ."

He says that inasmuch as gramicidin, a substance obtained from tyrothricin, has been shown to be less toxic and at the same time more potent against gram-positive organisms, "it appears likely that this substance may prove more useful in the treatment of certain localized infections."

An active thyroid is believed to conduce to creative activity and to be the basis of what is called the "artistic" temperament, whilst pituitary activity and musical or mathematical ability are said to go together. Much of this, however, is highly speculative.—*Sir Robert Hutchison.*

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